



1998

State  
of the  
Commute  
Report



SOUTHERN CALIFORNIA  
**ASSOCIATION of GOVERNMENTS**  
Southern California Rideshare

# 1998

## State of the Commute Report

### **Southern California Association of Governments Southern California Rideshare**

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April, 1999

# Southern California Association of Governments Mission Statement



**Leadership, vision** and **progress** which promote economic growth, personal well-being, and livable communities for all Southern Californians.

## The Association will accomplish this Mission by:

- ▲ Developing long-range regional plans and strategies that provide for efficient movement of people, goods and information; enhance economic growth and international trade; and improve the environment and quality of life.
- ▲ Providing quality information services and analysis for the region.
- ▲ Using an inclusive decision-making process that resolves conflicts and encourages trust.
- ▲ Creating an educational and work environment that cultivates creativity, initiative, and opportunity.

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# Southern California Rideshare Mission Statement

The mission of Southern California Rideshare is to connect people with alternative transportation choices to driving alone through a partnership of government, business and individuals.

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# 1998 STATE OF THE COMMUTE

## EXECUTIVE SUMMARY

Traffic congestion is one of Southern California's greatest challenges. Each day, Southern Californians waste nearly 1.7 million vehicle hours in congested traffic. Traffic congestion also contributes to air pollution, causes wasteful consumption of energy, and results in tremendous loss in productivity. As local and state transportation agencies seek to identify solutions to Southern California's transportation problems, it is important to understand how commuters get to and from work, how they perceive their commute, and what factors influence their commute decisions.

Toward this goal, eight annual State of the Commute Surveys have been conducted to study commute attitudes and behaviors in the Southern California region over the last ten years (This study was not conducted in 1995 and 1997 due to lack of funding).

The 1998 State of the Commute Survey is based on a telephone survey of commuters in Southern California. The survey provides updated information on commuters' travel behavior and attitudes about traffic congestion, alternative travel options, employer-provided transportation information and services and high occupancy vehicle (HOV) lanes.

Historically, the study has been a useful tool for transportation planners, operators, and public officials in their efforts to shape the region's transportation policy, infrastructure and legislation. The study also is used by businesses in the development of rideshare promotional activities. The following is a summary of the 1998 State of the Commute findings.

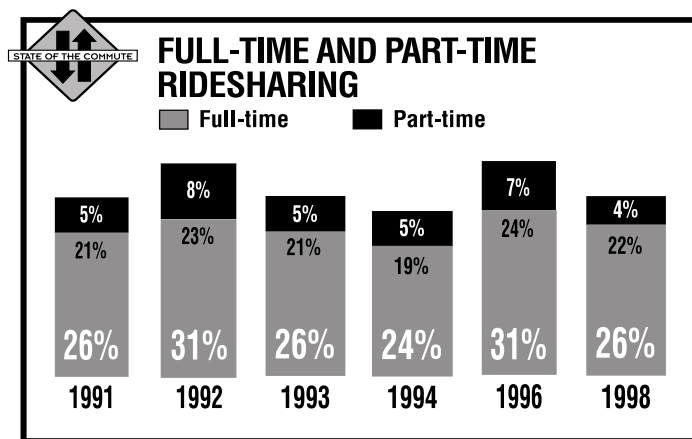
### TRAVEL BEHAVIOR AND TRENDS

- ◆ **PRIMARY TRAVEL MODE:** According to the 1998 survey, 77.3% of commuters drive alone, 0.9% ride motorcycle, 14.3% carpool, 3.5% ride the bus, 1.7% walk, 1.2% vanpool, 0.9% bicycle, and 0.6% take rail to work on a regular basis.

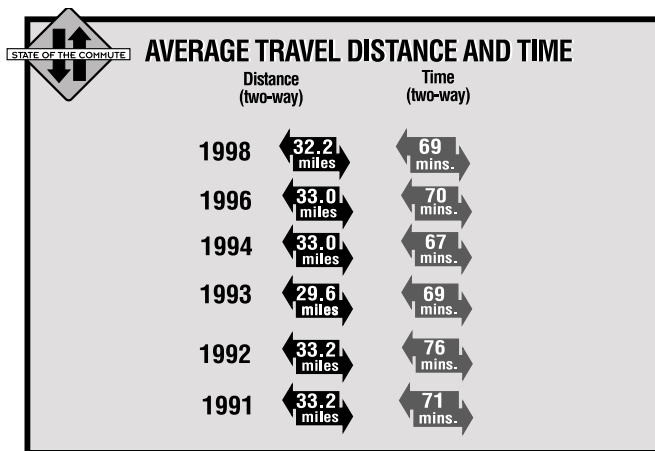
The difference in the drive alone rate in 1998 compared to previous years is not statistically sig-

nificant with the exception of 1994. Compared to 1996 findings, the share of drive-alone and motorcycle commuters increases slightly while the share of carpool and bus declines slightly. Usage of other travel modes is consistent with 1996 findings.

- ◆ **FULL-TIME AND PART-TIME RIDESHARING:** Twenty-six percent of commuters use alternatives to driving alone either full-time (three or more days a week) (22%) or part-time (one or two days a week) (4%). The percentage is lower than what was reported in 1996 but it is in line with 1993 and 1994 findings.



- ◆ **TRAVEL DISTANCE:** According to the 1998 survey, the average self-reported travel distance to work is 16.1 miles (one-way). In 1996, this figure was 16.5 miles. The difference is not statistically significant.
- ◆ **TRAVEL TIME:** The average travel time to work is 32 minutes; the average travel time home 37 minutes. This is consistent with the 33 minutes and 37 minutes reported in 1996.
- ◆ **ARRIVAL AND DEPARTURE TIME:** Of commuters surveyed, 37% say they arrive at work before 7:30 a.m. and 54% leave work before 5 p.m. Consistent with 1996 findings, a significant percentage of commuters are now arriving at the work site before 6 a.m. (9%).



◆ **CARPOOLS/VANPOOLS:** Carpools consist of an average of 2.5 members. Though still the second most common type of carpool formation, carpooling with co-workers has declined steadily from 47% in 1994 to 45% in 1996 and again down to 37% in 1998. Carpoolers report having been in their current carpool about two and a half years and travel an average distance of 19.0 miles to work. The average vanpool consists of 7.0 members. Vanpoolers report having been in their current vanpool an average of 28 months and travel an average distance of 25.3 miles to work. Among new ridesharers (those who began ridesharing in the last year), saving money was the leading reason (28%) they stopped driving alone. This suggests that economic factors are an important consideration in the decision-making process of many commuters.

◆ **BUS RIDERS:** Riders report they have been using bus service an average of about four and a half years. Respondents who do not currently ride the bus were asked whether there was a bus that they could take to get to work. Commuters who answered affirmatively constitute 48% of respondents, which represents a significant increase in awareness of bus availability from 32% reported in 1996 and 39% in 1994. But it is in line with the 45% reported in 1993. Bus riders commute an average distance of 13.6 miles.

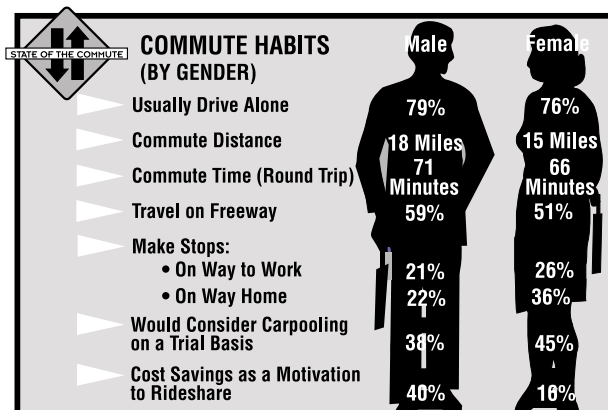
◆ **STOPS DURING THE COMMUTE:** Nearly one-fourth of all respondents mention that they make a stop on the way to work. Of these, 31%

stop to eat and another 28% take their child to day care or school. With regard to trip home, 28% of commuters make stops, with 32% stopping to buy groceries or go shopping. More commuters make stops on the trip home than they do on their trip to work.

◆ **NEED FOR VEHICLE DURING THE WORK DAY:** Fifty-eight percent of all respondents report they need their vehicle at work at least one day a week for either business or personal purposes. However, the average number of days a week these commuters need their vehicle at work is only 2.3. Forty-two percent of all respondents claim they don't need their vehicle at work at all for either business or personal reasons.

## DEMOGRAPHIC CHARACTERISTICS

◆ **GENDER:** Men are somewhat more likely than women to drive alone to work on a regular basis (79% vs. 76%) and are less likely to carpool to



work on a regular basis (13% vs. 16%).

◆ **AGE:** In general, younger commuters are more likely to use alternatives to driving alone than older commuters (32% of those under 30 years of age compared to only 14% of those 50 years of age and older).

◆ **ETHNICITY:** About 83% of Whites and 80% of Asians drive alone to work on a regular basis compared to 71% of African-Americans and 69% of Hispanics.

◆ **INCOME:** In general, the more money one makes, the more likely one is to drive alone to work. Those with an annual personal income of less than \$20,000 are least likely to drive alone (68%) and most likely to carpool (16%) or take a bus (10%) to work.

◆ **NUMBER OF MOTORIZED VEHICLES:** Respondents report an average of 2.5 motorized vehicles per household. Motorized vehicles include automobiles, trucks, vans and highway motorcycles owned or leased by members of the household. In addition, only 3% of the respondents report never having a vehicle available for commuting purposes.

### COMMUTER AWARENESS OF EMPLOYER- PROVIDED TRANSPORTATION INFORMATION AND SERVICES

Awareness of employer-provided transportation information and services to encourage use of alternative travel modes or work schedules is of particular interest to those who advocate the effectiveness of these programs in reducing peak period travel.

◆ **TELECOMMUTING:** Of those surveyed, 8.8% of the respondents say they have the opportunity to work at home instead of their regular place of work. This figure represents a significant decrease from the 12.5% reported in 1994, but is consistent with the 10% rates reported in previous years. Of those with the opportunity to work at home, 83% actually do. Telecommuters report working at home an average of 3.4 days per month. Nearly one quarter (23%) of commuters with a household income of \$100,000 or more have the opportunity to telecommute.

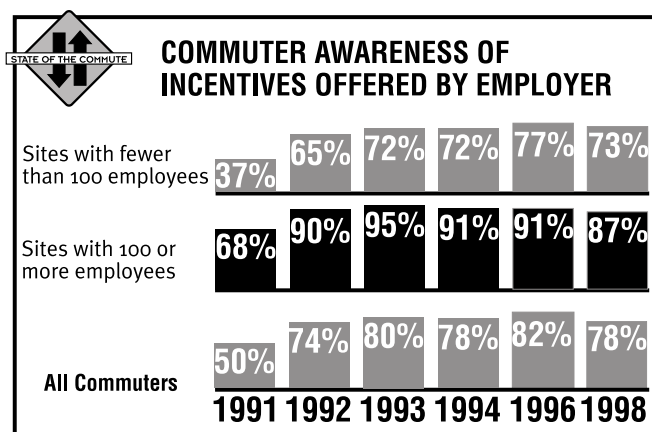
◆ **ALTERNATIVE WORK SCHEDULES:** Of those surveyed, 48% of area commuters report that their employer offers flexible work house; of these, 73% participate. In addition:

- 18% say their employer offers a 4/40 work week (working four, 10-hour days and getting a day off every week); of these, 11% participate.
- 10% report that their employer offers a 9/80 work week (working nine-hour days and getting a

day off every other week); of these, 32% participate.

- 5% of area commuters say their employer offers a 3/36 work week (working 12-hour days and getting two days off a week); of these, 10% participate.
- 6% of all respondents say they are currently on either a 4/40, 9/80, or 3/36 work schedule.

◆ **AWARENESS OF EMPLOYER-PROVIDED TRANSPORTATION INFORMATION AND SERVICES:** Commuters are most likely to be aware of the following employer-provided transportation incentives: flexible work hours (48%), a guaranteed ride home in the event of an emergency (38%), ridesharing information (32%), assistance in forming carpools/vanpools (28%), preferential parking (25%), 4/40 work schedule (18%), bus information on routes and schedules (16%), registration of employees with a rideshare agency (14%), free/low cost parking for ridesharing (13%), and contests/prizes for ridesharers (12%). However, the level of awareness declined for the vast majority of employer transportation programs from 1996 to 1998, particularly for



programs directly related to ridesharing assistance. Employees at sites with 100 or more employees were much more likely to say that their employer offered at least one transportation program (87%) than those at sites with fewer than 100 employees (73%). Employees at currently regulated sites with 250 or more employees were most likely to say that their employers offered at least one transportation program (90%).

Commuters aware of employer-provided transportation information and services were asked whether they have used any of them. Participation rates are highest for the following transportation incentives: telecommuting (83%), flexible work hours (73%), use of a company car to run personal errands (54%), and transportation allowances (53%). Other programs with higher participation rates include: registration with a rideshare agency (33%), 9/80 work schedule and free or low-cost parking for ridesharers (both 32%), contests/prizes for ridesharers (29%), ridesharing information (28%), carpool/vanpool formation assistance and ridesharing subsidies (both 27%), and preferential parking spaces to ridesharers (26%).

In general, of employees who have utilized transportation services offered by their employers, more than one in seven believes that it influenced their choice of travel mode. The most influential programs are: transportation allowance (40%), company car during the day to ridesharers (33%), guaranteed ride home (24%), carpool and vanpool formation assistance (17%), ridesharing information (16%), and bus and rail information on routes and schedules (16%).

#### ◆ RECOGNITION OF THE

##### 1-800-COMMUTE TELEPHONE NUMBER:

Of those surveyed, 36% are aware of the 1-800-COMMUTE telephone number and 4% have actually called the number for commute-related information. Recognition of 1-800-COMMUTE is significantly less than the recognition of a RIDE number (61%) reported in 1994. The 1-800-COMMUTE number was implemented in 1994.

Of those who have contacted the 1-800-COMMUTE number, the majority (55%) were interested in receiving information on carpools/vanpools, followed by bus/rail options (33%), Metrolink (16%), freeway conditions (6%), and telecommuting (5%).

- ◆ **RECEIPT OF THE RIDEGUIDE:** Six percent of regional commuters report receiving a RideGuide during the past 12 months, significantly lower than the 10% reported in 1996. Predominantly, most of these commuters were

interested in information on carpooling (72%), followed by vanpooling and bus (both 9%), rail (8%), HOV lanes (2%), and park and ride lots (0.5%). Commuters give the RideGuide an overall satisfaction rating of 6.2, on a one to nine scale, where one is low and nine is high.

## USE OF AND ATTITUDES TOWARD HOV LANES

#### ◆ AVAILABILITY AND USE OF HOV LANES:

More than half of commuters use a freeway to travel to or from work (55%). Of these, 53% report having HOV lanes available to them. This continues an up trend since 1993 (37%). Of those having HOV lanes available to them, more than one in five (21%) actually used the lanes at least once in the week prior to the survey. The vast majority of ridesharers with access to a HOV lane (75%) report traveling on the HOV lane to work.

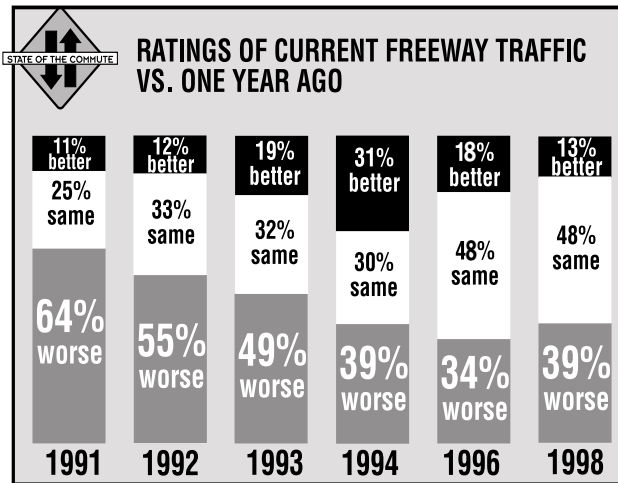
- ◆ **ATTITUDES TOWARD HOV LANES:** Of the respondents with no HOV lanes available to them, 51% believe the availability of these HOV lanes would personally encourage them to carpool, vanpool, or take the bus.

## ATTITUDES TOWARD TRAFFIC AND THE COMMUTE

- ◆ **PERCEPTIONS OF TRAFFIC:** Survey respondents were asked to evaluate traffic during their commute, looking both at surface streets and freeways. Commuters consider freeway traffic worse than street traffic. Of those surveyed, 15% consider freeway traffic during their commutes to be always good, and 18% consider street traffic to be always good. This represents a further decline from 1996 findings of 16% and 20% respectively after a significant drop from 1994 (26% vs. 37%). Noticeably the gap between freeways and surface streets is narrowing.

Compared to 1996 (34%), more commuters (39%) consider the current freeway traffic worse than one year ago. This reverses a down trend since 1991 (64%). However, the share of commuters reporting that their commute is longer now than a year ago has remained about the same since 1994 (28-29%) after a steady decline from a high of 47% in 1991.





◆ **CONSIDERATION OF ALTERNATIVE MODES:** When drive-alone commuters were asked what alternative travel modes they would consider using on a trial basis, 41% said they would consider carpooling, 33% said they would consider vanpooling, 28% would consider walking or jogging, 24% would consider bicycling, 16% would consider taking the bus, and 15% would consider rail.

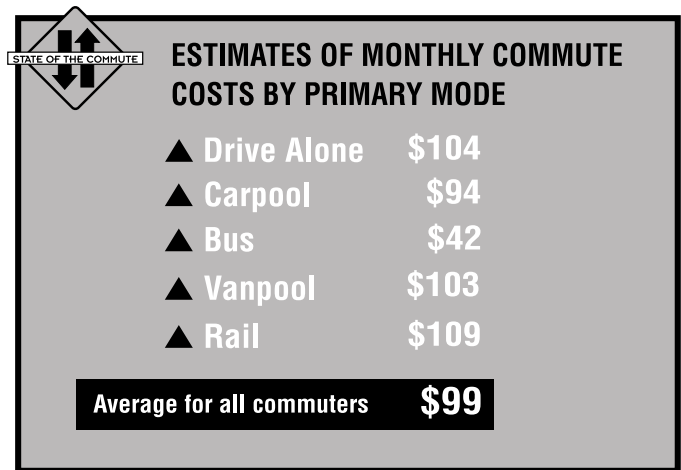
◆ **SATISFACTION WITH THE COMMUTE:** On a scale of one (low) to nine (high), respondents give their commute an average rating of 6.7. The average satisfaction rating has improved steadily since 1990 (5.8). In addition, 42% of all commuters rate their satisfaction level as either an eight or nine. Only 4% rate their level of satisfaction as either a one or two, the lowest ratings.

◆ **STRESSFULNESS OF THE COMMUTE:** More than one-quarter (28%) of all commuters report that they are fairly often or very often bothered by traffic congestion. The longer the trip, in terms of time and distance, the more bothered by traffic congestion and the more stressed commuters become. Walkers, bus riders, and bicyclists are the least bothered by traffic congestion; vanpoolers are the most bothered.

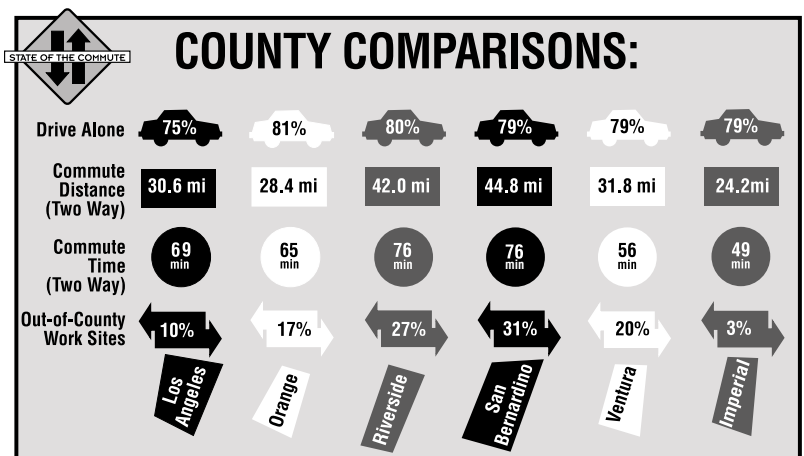
◆ **COMMUTE-RELATED TRANSITIONS:** Nearly one in three respon-

dents (31%) changed residence within the last two years. Of these, 28% cited commute-related reasons, significantly higher than those reported in previous surveys (17% in 1996, 15% in 1994, and 23% in 1993). Similarly, four in ten respondents changed jobs within the last two years; of these, 26% cited commute-related reasons.

◆ **COMMUTE COSTS:** More than one-third (35%) of all respondents claimed to have previously calculated their commuting costs. For this group, the perceived monthly cost of commuting, on average, is \$99, higher than the \$93 reported in 1996.



◆ **COUNTY COMPARISONS:** Comparing the commute across county lines, the study shows Los Angeles County has the lowest drive alone rate, while Orange County has the highest. Riverside and San Bernardino County residents are the most likely to cross county lines to get to



work. Residents in San Bernardino and Riverside Counties spend the most time commuting and travel the farthest. Orange County has the highest rate of HOV lane availability but the lowest carpooling rate. Los Angeles County commuters perceive their freeway traffic to be worse than do commuters in other counties while Orange County commuters perceive their surface street traffic to be worse than do commuters in other counties.

## 1998 STATE OF THE COMMUTE CONCLUSIONS AND RECOMMENDATIONS

### CONCLUSIONS

Results of the 1998 State of the Commute study support the following major conclusions:

- ◆ Overall, travel characteristics of regional commuters - including primary transportation modes, commute distance and time, work place arrival and departure times, parking, freeway and alternate route usage, side trips taken before and or after work, the availability of a vehicle for getting to and from work, the need for a car during the work day, and park and ride lot usage - are consistent with findings from previous surveys.
- ◆ Drive-alone commuters continue to show greater interest in carpooling than in any other alternative travel mode.
- ◆ Compared to 1996, awareness of most employer transportation programs has declined significantly, likely a result of weakened regional marketing efforts due to substantial cuts in funding to the regional rideshare programs and elimination or scaling-down of employee trip reduction programs by employers, particularly at those sites with 100-249 employees, in response to air quality deregulation.
- ◆ Employer-provided transportation information and services may influence an employee's commute mode choice. In general, of employees who have utilized transportation services offered by their employer, one in seven believes that these services influenced their choice of travel mode.

- ◆ Despite the modestly worsening perception of traffic conditions on both freeways and surface streets, commuters continue to be slightly more satisfied with their overall commute.
- ◆ Advertising campaigns that emphasize "public" issues are not likely to significantly change commute behavior since commuters cite personal factors over public issues in their selection of travel mode. The primary motivating factors for commuters in choosing their travel mode are: convenience/flexibility, travel time, reliability/dependability, available commute options, and vehicle availability at work. Less than two percent of commuters report that reducing congestion or improving air quality is a factor they consider when deciding how they travel to work.
- ◆ There is no single transportation alternative which will address the needs and interests of all commuters. Findings from the State of the Commute reveal that commuters differ in terms of their commute characteristics - trip distance, trip



time, work site arrival and departure times - as well as their attitudes about traffic congestion, commute stress and satisfaction with the commute. In addition, factors which influence an individual's decision on how they travel to work vary considerably between individual commuters.

There are several environmental, social and economic factors that may make the job of persuading commuters to break the drive-alone habit even more difficult than in previous years:

- ◆ Enactment of SB 432, which permanently removes air quality regulation at previously regulated employer sites with 100 to 249 employees,

has resulted in a significant decline of employer-provided transportation information and services to encourage ridesharing;

- ◆ The continuing ambivalent attitudes commuters have toward their commute;
- ◆ Earlier arrival times (a significant number of commuters are arriving at their work sites at earlier hours, which means they are avoiding the peak congestion hours, are more difficult to match with potential carpool partners and therefore generally less interested in trying commute alternatives);
- ◆ Although perceived commuting cost is higher, the low costs of driving alone have not increased significantly in recent years;
- ◆ While new rail options have been introduced to the region, high fares on some routes, limited service and limited routes have made them attractive to a relatively small percentage of the commuting population. Alone, they cannot be expected to significantly impact the region's transportation problems.

Taken together, all these factors create an environment that makes it easy for commuters to continue driving alone.

## RECOMMENDATIONS

While the existing environment makes driving alone so attractive, data from the State of the Commute study show that there is a group of commuters who can be adequately served by commute alternatives. To encourage and support the use of commute alternatives by these commuters, it is recommended that transportation planners, operators, policy makers and employers in this region implement the following actions: increase regional marketing efforts to sustain the existing carpool market share, support efforts to expand and retain the regional HOV network, continue to offer a mix of alternatives to drive-alone commuting, encourage voluntary-provided transportation information and services that promote ridesharing at work sites, and conduct marketing campaigns that emphasize personal reasons for changing drive-alone behavior.

### ◆ *Increase Regional Marketing Efforts to Sustain the Existing Carpool Market Share*

The role of carpooling in Southern California is significant. Given the dispersed pattern of jobs and housing within the region, the length of the commute that many commuters daily endure, and their somewhat limited travel options, carpooling remains the most accessible alternative commute option available to regional commuters.



However, there are many factors that are making it more difficult to keep the existing carpool market share. Funding to the rideshare programs in this region has been cut significantly over the past several years. Air quality deregulation especially SB 432 has weakened regulatory support to rideshare programs at work sites. As a result, fewer commuters in the SCAG region are receiving RideGuides, carpooling with co-workers is declining, and employee's awareness of many employer transportation programs is down significantly.

It is very important to maintain the existing carpool market share because just a one percent drop in the carpooling rate translates into more than 40,000 additional vehicles on our already crowded freeways and surface streets daily which in turn results in an annual increase of 302 million vehicle miles of travel.

In order to sustain the existing carpool market share, more resources are needed to strengthen rideshare programs in this region to promote voluntary ridesharing at work sites, market the extensive regional HOV network to the regional commuters, and conduct marketing campaigns to increase commuter's awareness of available commute options.

### ◆ *Support Efforts to Expand and Retain the Regional HOV Network*

Findings from the State of the Commute study illustrate the important role HOV lanes play in encouraging drive-alone commuters to rideshare. About nine in ten HOV users reported that the HOV lane saved them time. Time savings ranks second only to convenience as a motivating factor in an individual's choice of travel mode. More than half of the survey respondents with no access to HOV lanes believe that the availability of HOV lanes would personally encourage them to rideshare. As a result, HOV lanes may be one of the region's most powerful incentives to rideshare.

HOV network is an integral part of the solutions prescribed by the recently adopted Regional Transportation Plan (RTP) to address traffic congestion and air pollution in this region. The RTP proposed more than \$1 billion over the next two decades to expand the existing HOV network. Studies have shown that HOV lanes can have a significant impact on carpooling behavior among peak period commuters, and particularly on those able to take full advantage of the lane's travel time savings. Therefore, as the HOV network expands, support should be given to these new facilities as they open and to aggressively market and promote HOV lanes to the commuting population.

### ◆ *Continue to Offer a Mix of Alternatives to Drive-Alone Commuting*

Commuter interest in convenience, flexibility, time savings, and cost-effectiveness account for much of their reluctance in using alternative means of transportation since many alternative options are perceived as not meeting (and frequently they do not meet) these criteria. Even when faced with extreme congestion (as was the case in 1994 after the Northridge earthquake), commuters will adapt by choosing the travel option which is most convenient for them to use. The reasons people choose solo driving can be summed up simply: it's cheap, fast, and easy. Some people do choose to rideshare for a variety of reasons: for long distance commuters the appeal is often financial and/or a matter of saving time; for others the attraction is having company during the drive; some prefer to work at home; still others have no vehicle and must rely on alternatives.

Findings from the State of the Commute suggest that the ability of alternative options to significantly

chip away at the large block of drive-alone commuters is limited if they do not meet the diverse needs, concerns and interests of commuters. Therefore, in a region where there are so many commuters with different needs, a variety of alternatives should be offered.

Since the implementation of Regulation XV, regional efforts have been concentrated on assisting employers with regulatory compliance. To more effectively promote the full mix of commute options, emphasis should be placed on applying proactive, targeted marketing strategies to reach those employers, or individuals, with a definite interest or need, in addition to assisting regulated employers with compliance.

### ◆ *Encourage Voluntary Employer-Provided Transportation Information and Services that Promote Ridesharing at Work Sites*

Work sites continue to be a very important rideshare market because it is easier for employees at the same or nearby work site to form carpools or vanpools due to their similar origins and destinations, work hours, and regular commuting trips. Carpooling with co-workers is the second most common type of carpool formation (37%). Given the air quality deregulation, it is even more imperative to encourage voluntary employer-provided rideshare information and services at work sites so that existing ridesharers can get the rideshare assistance they need and potential ridesharers will have enough incentives to change their solo-driving habits. The marketing of ridesharing options at the work site should be considered as an essential part of any strategy aimed at sustaining current carpool market share and converting drive-alone commuters into ridesharers.

### ◆ *Conduct Marketing Campaigns that Emphasize Personal Reasons for Changing Drive-Alone Behavior*

Through this and previous State of the Commute studies, it is clear that the manner in which ridesharing alternatives are marketed to commuters appears to have some impact on how they respond. Mass media campaigns play a role in broadening commuter awareness about the region's transportation problems and in educating commuters about the breadth of commute options. Alone, however, these campaigns do not motivate commuters to change their habits.

Commuters continue to choose their transportation mode based on personal considerations: convenience/flexibility, travel time, reliability/dependability, vehicle availability at work, work hours, and commuting costs. Future advertising campaigns should, therefore, emphasize the true costs and disadvantages of driving alone and the personal benefits of ridesharing such as travel time, saving money, and convenience. They should also be consistent in content and frequency, and offer a strong call to action.

## ABOUT THE STUDY

The methodology for all eight State of the Commute surveys has been the same. An outside marketing research firm drew a sample of commuters based on randomly selected telephone numbers for the region. The sample is designed to be representative of all commuters residing in the SCAG region who are 18 years or older and work outside the home at least 35 hours per week. Data are gathered through a 16-20 minute telephone survey between September and December. The timing for data collection has remained virtually the same for all eight surveys.

Data for the 1998 State of the Commute study was obtained through 2,925 completed telephone surveys. Starting in 1996, a larger sample size was obtained (historically about 2,500) due to the inclusion of Imperial County. A 1.8 percent sampling error is normally associated with sample sizes of 2,900. A 1.8 percent sampling error means that if this survey were conducted 100 times, one would be confident that 95 times out of 100 the characteristics of the sample would reflect the characteristics of the population within plus or minus 1.8 percent.

Interviewers were instructed to complete 525 interviews within Los Angeles, Orange, Riverside, San Bernardino and Ventura counties and 300 interviews within Imperial County. Once all surveys has been completed, responses were weighted by the number of eligible respondents within the household. For analysis at the regional level, data was additionally weighted by the number of workers within each county based on the 1990 Census.

Data obtained from the 1998 State of the Commute is compared with that of the previous seven surveys

to uncover changes in behavior and attitudes. Information obtained from the 1998 State of the Commute study includes travel modes, work trip time and distance, arrival and departure times, stops made enroute, work schedules, full-time and part-time transportation alternatives, vehicle availability, parking costs, awareness of and participation in employer transportation programs, employer size, park and ride lot usage, and carpool characteristics. Demographic data gathered includes age, gender, race, ethnicity, occupation, years at the work site and residence, number of household vehicles, home and work counties, and household income.

The 1998 study also gathered information about various transportation issues, including:

- ◆ freeway usage;
- ◆ use of and attitudes toward HOV lanes;
- ◆ use of alternate routes;
- ◆ availability of transit;
- ◆ perceptions of traffic conditions and changes in those conditions over time;
- ◆ availability of and participation in alternative work schedules and telecommuting;
- ◆ commute satisfaction;
- ◆ commute costs;
- ◆ commute stress;
- ◆ previous ridesharing experience;
- ◆ commuter concerns;
- ◆ willingness to try alternative travel options in the face of changing traffic conditions and reasons for unwillingness;
- ◆ recognition of regional commuter assistance telephone number and personalized commute planner (RideGuide).

To request copies of the 1998 State of the Commute full report, write State of the Commute, Southern California Rideshare, 818 W. 7th Street, 12th floor, Los Angeles, CA 90017 or call (213) 236-1984.

# Table of Contents

Section	Page
EXECUTIVE SUMMARY	I
TABLE OF CONTENTS	XI
LIST OF TABLES	XIII
<b>CHAPTER 1: INTRODUCTION</b>	
1.1 Description of Southern California Association of Governments and Southern California Rideshare	1
1.2 Purpose of the State of the Commute Study	1
1.3 Utilization of Findings	1
1.4 Changes in the Regulatory Environment	2
1.5 The Significance of Carpooling in Southern California	2
1.6 Outline of the Report	3
<b>CHAPTER 2: TRAVEL BEHAVIOR</b>	
2.1 Introduction	4
2.2 Travel Mode	4
2.3 Commuting Distance	5
2.4 Commuting Time To and From Work	6
2.5 Work Place Arrival and Departure Times	7
2.6 Parking	8
2.7 Freeway Behavior	8
2.8 Alternate Route Usage	8
2.9 Side Trips Taken Before and/or After Work	9
2.10 Availability of Vehicle for Getting to Work	10
2.11 Need for a Vehicle During the Work Day	10
2.12 Park & Ride Lot Usage	10
2.13 Carpool and Vanpool Characteristics	10
2.14 Characteristics of Bus Riders	13
2.15 Major Differences Between the Full-time and Part-time Ridesharer	13
2.16 Summary of Differences Between the 1996 Survey and Previous Surveys	14
<b>CHAPTER 3: DEMOGRAPHIC CHARACTERISTICS</b>	
3.1 Introduction	17
3.2 Travel Behavior by Gender	17
3.3 Travel Behavior by Age	18
3.4 Travel Behavior by Income	19
3.5 Travel Behavior by Ethnicity	21
3.6 Travel Behavior by Employer Site Size	22
3.7 Additional Demographic Characteristics	23

## **CHAPTER 4: EMPLOYER TRANSPORTATION PROGRAMS**

4.1	Introduction	26
4.2	Awareness of Employer Programs	26
4.3	Telecommuting	29
4.4	Alternative Work Schedules	30
4.5	Recognition of 1-800-COMMUTE Telephone Information	31
4.6	RideGuide	32

## **CHAPTER 5: COMMUTER ATTITUDES**

5.1	Introduction	34
5.2	Attitudes Toward the Commute	34
5.3	Overall Satisfaction with the Commute	36
5.4	Commuter Stress	37
5.5	Commuter Concerns	38
5.6	Consideration of Alternative Travel Modes	39
5.7	Attitudes Toward and Use of HOV Lanes	41
5.8	Familiarity with Regional Public Awareness Campaigns	41
5.9	Costs of Commuting	42

## **CHAPTER 6: COUNTY COMPARISONS**

6.1	Introduction	43
6.2	Travel Mode	43
6.3	Trip Distance	45
6.4	Travel Time To and From Work	45
6.5	Freeway Usage	46
6.6	Bus Availability	46
6.7	Side Trips Taken Before and/or After Work	46
6.8	Parking	47
6.9	Park & Ride Lot Usage	47
6.10	Alternate Route Usage	47
6.11	High Occupancy Vehicle Lanes	47
6.12	Work County Location	48
6.13	Employer-Provided Transportation Information and Services	48
6.14	Telecommuting	54
6.15	Recognition of 1-800-COMMUTE Telephone Number	54
6.16	Perceptions of Freeway Traffic During Commute	55
6.17	Perceptions of Surface Street Traffic During the Commute	55
6.18	Commute Satisfaction	55
6.19	Commuter Stress	56
6.20	Commuter Concerns	57
6.21	Consideration of Alternative Travel Modes	57
6.22	Costs of Commuting	58
6.23	Summary of Characteristics by County	58

## **APPENDICES**

Appendix A:	Commuter Questionnaire	63
Appendix B:	Project Documentation of the 1998 State of The Commute Survey	107
Appendix C:	A Guide to Transportation Agencies	111

## LIST OF TABLES

TABLE	TITLE	PAGE
2.1	Primary Travel Mode	4
2.2	One-Way Commuting Distance	5
2.3	Commuting Time for Trip to Work	6
2.4	Commuting Time for Trip Home	7
2.5	Arrival Time at Work	7
2.6	Departure Time from Work	8
2.7	Employee Share of Parking Cost	9
2.8	Employee Parking Fees	9
2.9	Incidence of Stopping on Way to Work or Home	9
2.10	Relationship to Persons Within Carpool or Vanpool	11
2.11	Primary Differences Between Co-Worker and Friend/Family Carpools	12
2.12	Summary of Measures Across Surveys	15
2.13	Summary Comparison of Primary Drive-Alone Commuters and Carpoolers	16
3.1	Introduction	17
3.2	Gender Distribution	17
3.3	Age Distribution	19
3.4	Annual Household Income Distribution	20
3.5	Ethnic Group	21
3.6	Occupation	23
4.1	Awareness by Employees of Employer Transportation Programs	27
4.2	Awareness by Employees of Employer Transportation Programs by Employer Size	28
4.3	Ridesharing Participation and Frequency by Employer Size	29
4.4	Participation in Employer Transportation Programs	30
4.5	Influence of Program on Commute Mode Choice	31
4.6	Awareness of Alternative Work Schedules	32
4.7	Recognition of 1-800-COMMUTE Number by Ethnic Group	32
4.8	Freeway Users Recognition of the 1-800-COMMUTE Number	32
4.9	Non-Freeway Users Recognition of the 1-800-COMMUTE Number	32
5.1	Perceptions of Traffic Among Freeway Users	34
5.2	Perceptions of Surface Street Traffic Among All Commuters	34
5.3	Comparison of Current Freeway Traffic to One Year Ago	35
5.4	Regional Employment	35
5.5	Comparison of Current Surface Street Traffic to One Year Ago	36
5.6	Commute Satisfaction by Travel Mode	36
5.7	Commute Satisfaction by Trip Distance	37
5.8	Frequency of Feeling Bothered by Traffic During Commute	37
5.9	Frequency of Need to Wind Down After Trip to Work	38
5.10	Degree Commute Home Has Negative Effect on Home Life	38
5.11	Factors Considered when Choosing Mode by Primary Commute Mode	39
5.12	Likelihood of Alternative Mode Use	40
6.1	Primary Travel Mode by Home County	44
6.2	Commute Distance in Miles by Home County	45
6.3	Commuting Time for Trip to Work by Home County	45
6.4	Commuting Time for Trip to Home by Home County	46
6.5	Freeway Usage by Home County	46



## LIST OF TABLES (cont.)

TABLE	TITLE	PAGE
6.6	Awareness of Bus Availability by Home County	47
6.7	Stops Made on the Way to Work by Home County	47
6.8	Stops Made on the Way Home by Home County	48
6.9	Employee Share of Parking Cost by Work County	48
6.10	Home County by Work County	49
6.11	Southern California Association of Governments 1994 Regional Mobility Element Model	49
6.12	Awareness by Employees of Employer Transportation Programs by Work County	50
6.13	Participation in Employer Transportation Programs by Work County	52
6.14	Opportunity to Work at Home and Currently Work at Home	54
6.15	Recognition of 1-800-COMMUTE Telephone Information Number by Home County	54
6.16	Recognition of 1-800-COMMUTE Telephone Information Number by Work County	54
6.17	Perceptions of Freeway Traffic by Home County	55
6.18	Comparison of Current Freeway Traffic to One Year Ago by Home County	55
6.19	Perceptions of Surface Street Traffic by Home County	56
6.20	Comparison of Current Surface Street Traffic to One Year Ago by Home County	56
6.21	Overall Commute Satisfaction Rating	56
6.22	Measures of Commuter Stress	57
6.23	Top 10 Commuter Concerns	57
6.24	Willingness to Consider Using an Alternative Mode by Home County	58
6.25	Costs of Commute	58

# 1 Introduction

## 1.1 DESCRIPTION OF SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS AND SOUTHERN CALIFORNIA RIDESHARE

Southern California Association of Governments (SCAG) is a Council of Governments serving more than 15 million people in a region covering more than 38,000 square miles. There are six counties - Los Angeles, Orange, Riverside, San Bernardino, Ventura and Imperial - containing 188 cities within the SCAG region. SCAG is the officially designated regional Metropolitan Planning Organization (MPO) responsible for preparing regional policies and action plans that address issues that cross city and county boundaries such as transportation, air quality, housing, growth, hazardous waste and water quality. In 1995, SCAG assumed the responsibility for providing regional rideshare services through its Information Services Department.

Southern California Rideshare, a service of SCAG's Information Services Department and formerly Commuter Transportation Services, Inc., is the nation's oldest and largest commute management organization. Southern California Rideshare services all six counties within the SCAG region. Rideshare activities are funded by the United States Department of Transportation, Federal Highway Administration and/or the Federal Transit Administration with the cooperation of the State of California, Department of Transportation, Los Angeles County Metropolitan Transportation Authority, Riverside County Transportation Commission, San Bernardino Associated Governments, and Ventura County Transportation Commission. The people at Southern California Rideshare believe that the quality of life and work is affected by transportation. Their mission is to improve commuter mobility by reducing single-occupant commute trips. Southern California Rideshare achieves its mission by providing transportation demand management information and services to more than 2,500 employer sites, nearly 350,000 commuters maintained in its data base, and decision-makers throughout the region.

## 1.2 PURPOSE OF THE STATE OF THE COMMUTE STUDY

The purpose of the State of the Commute study is to examine the commute behavior and attitudes of commuters living in Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties. Information is gathered on commuters' changing behavior and attitudes toward their current travel modes and routes, congestion, HOV lanes, employer programs and daily commute activity.

Data gathered through this eighth survey is compared with the results from previous surveys to identify trends and determine whether significant differences have occurred over time. With the annual surveys, Southern California Rideshare remains abreast of the latest regional commuting trends and reports these findings to local organizations and agencies with a vested interest in transportation issues. By keeping a pulse on regional commuting behavior, Southern California Rideshare and others are better able to meet the changing needs of the commuting public by improving marketing strategies and adapting services accordingly.

## 1.3 UTILIZATION OF FINDINGS

Findings from the 1998 survey are compared with the results from the previous surveys to determine whether travel behavior and attitudes have changed over the last eight years.

- ◆ Results from the survey are used to improve Southern California Rideshare's overall marketing strategy by identifying key market segments for its evolving mix of services. Attitudinal information regarding alternative modes, HOV lanes, and alternative routes is highly beneficial to the development and promotion of new services. Furthermore, updated information on commute satisfaction, commute concerns, commute stress, impact of commute-related issues on home and work location choices, and willingness to try alternative modes helps Southern California Rideshare to better position ridesharing to the general public.

- ◆ With a better understanding of gender, age, income, ethnicity, employer site size and county differences in commuting behavior and attitudes, Southern California Rideshare can more effectively promote ridesharing in these distinct markets.
- ◆ The identification of trends helps Southern California Rideshare develop strategic planning and marketing goals.
- ◆ Regional commute trends are tracked as this data is updated and reported to the media and other organizations and individuals with a vested interest in regional transportation.
- ◆ Monitoring the commuting activity of employees at both regulated and unregulated work sites may assist legislators, regulators and others in gaining a better understanding of mandatory vs. voluntary ridesharing efforts.
- ◆ An investigation of commuting behavior and attitudes may assist policy makers and those with a vested interest in transportation issues in developing contingency plans in the wake of a regional disaster.

#### **1.4 CHANGES IN THE REGULATORY ENVIRONMENT**

Significant legislative changes occurred between 1988 and 1998 within Southern California pertaining to air quality and transportation issues; in particular, California Senate Bills 432 and 836, the South Coast Air Quality Management District's (SCAQMD) Rule 2202 (formerly Rule 1501.1, Rule 1501 and Regulation XV) and the Ventura County Air Pollution Control District's (VCAPCD) Employee Commute Options (Rule 210). Implemented in the late 1980s, Regulation XV and Rule 210 required particular employers (based on the number of employees at the work site) to develop employee trip reduction plans to decrease the number of single-occupant vehicles arriving at the work site during the morning peak hours. In December 1995, the state Legislature prohibited mandatory employer-based trip reduction rules except where required by federal law and mandatory trip reduction plans. At the same time, Congress amended the Clean Air Act to permit equivalent emission reduction strategies in

lieu of the mandatory trip reduction rules. In response to both developments, the SCAQMD rescinded Rules 1501 and 1501.1 and replaced them with Rule 2202. Instead of mandating employers to implement an employee trip reduction program, the new rule provided a menu of emission and trip reduction strategies/mitigation measures from which to choose. However, in September 1996, Senate Bill 836 (Lewis) was enacted which temporarily raised the threshold of Rule 2202 from worksites with 100 employees to worksites with 250 employees starting January 1, 1997. Later, Senate Bill 432 was signed into law in June 1998, permanently removing regulatory requirements at worksites with 100 to 249 employees.

#### **1.5 THE SIGNIFICANCE OF CARPOOLING IN SOUTHERN CALIFORNIA**

The role of carpooling in Southern California is significant. Given the dispersed pattern of jobs and housing within the region, the length of the commute that many commuters daily endure, and their somewhat limited travel options, carpooling remains the most accessible alternative commute option available to regional commuters.

Carpooling is the number one alternative to driving alone in the Los Angeles area. Carpooling moves over three times more workers than transit, according to the 1990 census (1,057,051 vs. 310,616).

The Los Angeles region has the highest metropolitan carpooling rate in the nation, according to the 1990 Nationwide Personal Transportation Study. Los Angeles is the only major metropolitan area in the nation where carpooling has been maintaining its relative market share. This finding is further supported by data from SCAG's State of the Commute study which shows that since 1990, carpooling as a primary travel mode has remained consistently around 14 percent.

Carpooling is the cheapest way to cut traffic and smog, according to an Apogee Research study for the National Association of Regional Councils. It costs significantly less to cut the number of cars on the road by forming carpools than by bus or rail.

Regionally we must sustain the existing carpool market share. Just a one percent drop in the carpooling rate translates into more than 40,000 additional vehicles on our freeways and surface streets daily which in turn results in an annual increase of 302 million vehicle miles of travel.

## **1.6 OUTLINE OF THE REPORT**

This report consists of an executive summary, six chapters, and three appendices.

The Executive Summary presents major findings, conclusions, and recommendations of the 1998 State of the Commute study.

Chapter 1 describes the purpose of the State of the Commute study and how the findings are utilized. A brief overview of the changes in the regulatory environment is also provided.

Chapter 2 details commuter behavior. Specifically, travel mode, travel distance, travel time, arrival and departure times, parking costs, freeway and alternate route usage, side trips taken before and after work, the need for an automobile during the work day, park and ride lot usage, and carpool and transit characteristics are addressed.

Chapter 3 describes the demographic characteristics of the respondents. This chapter also highlights commute behavior by gender, age, income, ethnicity, and employer site size.

Chapter 4 focuses on awareness and participation in employer transportation programs, including telecommuting and alternative work schedules, and recognition of Southern California Rideshare, the 1-800-COM-

MUTE telephone number, and the RideGuide.

Chapter 5 describes commuter attitudes and overall satisfaction with the commute in addition to commute stress, commute concerns, and willingness to try alternatives to driving alone. It also explores why commuters are unwilling to try other travel options, attitudes toward and use of HOV lanes, familiarity with regional public awareness campaigns and commuting costs.

Chapter 6 provides a summary of the critical findings by county.

Appendices for the document immediately follow Chapter 6. A copy of the survey questionnaire is presented in Appendix A. A complete description of the sampling methodology and how the study differs from data collected by the U.S. Bureau of the Census can be found in Appendix B. Appendix C provides a brief description and contact information of major transportation agencies in Southern California.

Please note the 1996 State of the Commute survey findings presented in this report are slightly different from those reported in the 1996 State of the Commute Report because the weighting procedures for the 1996 survey data have been revised to be consistent with those from previous surveys.

# 2 Travel Behavior

## 2.1 INTRODUCTION

Tracking travel characteristics is an essential component of analyzing regional travel behavior. Travel characteristics, such as primary transportation mode, commute distance and times, work place arrival and departure times, parking, freeway and alternate route usage, side trips taken before and/or after work, the need for a car during the work day, park and ride lot usage, and carpool and transit rider characteristics are all necessary ingredients in adequately portraying existing conditions. This chapter primarily reports on travel characteristics of all survey respondents. Further analysis of travel behavior by demographic characteristics are the focus of Chapter 3.

## 2.2 TRAVEL MODE

A travel characteristic of particular interest is the primary transportation mode which commuters use to get to and from work. A primary transportation mode is defined as the travel mode by which a commuter travels to work for more than half of their workdays in a typical week. Primary mode, regular mode, and usual mode are used interchangeably throughout the report. Data on the primary trans-

portation mode used from the 1998 survey is compared with those from the previous surveys in Table 2.1.

As the total counts for the surveys show, 2,548 individuals responded in 1991; 2,487 in 1992; 2,591 in 1993; 2,625 in 1994; and 2,925 in both 1996 and 1998. A  $\pm 2.0$  percent sampling error is normally associated with sample sizes of 2,500. At a 95 percent confidence level, the sampling error associated with a sample size of 2,925 is  $\pm 1.8$  percent. Unless otherwise noted, almost all statistics reported in this chapter have a similar sampling error of about  $\pm 2$  percent since these statistics are based on a random sample of 2,500-2,925 commuters designed to be representative of the regional commuter population. For a more detailed description of this and other sampling issues, please refer to Appendix B.

A historical look at primary travel mode over the last eight years shows a relatively consistent occurrence in the drive alone rate (75.9-80.3%). The difference in the drive alone rate in 1998 compared to previous years is not statistically significant with the exception of 1994.

TABLE 2.1

PRIMARY TRAVEL MODE												
Travel Mode	1991		1992		1993		1994		1996		1998	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Drive Alone	2,014	79.0%	1,921	77.2%	2,042	78.8%	2,107	80.3%	2,219	75.9%	2,262	77.3%
Carpool	334	13.1	341	13.7	374	14.4	372	14.2	455	15.6	419	14.3
Vanpool	13	0.5	29	1.1	29	1.1	28	1.0	25	0.9	34	1.2
Bicycle	14	0.6	27	1.1	13	0.5	17	0.6	14	0.5	14	0.5
Motorcycle	8	0.3	4	0.2	13	0.5	7	0.3	4	0.1	28	0.9
Public Bus	120	4.7	111	4.5	69	2.7	55	2.1	138	4.7	103	3.5
Commuter Rail	5	0.2	0	0.0	4	0.2	4	0.2	21	0.7	17	0.6
Private Bus	6	0.2	3	0.1	13	0.5	0	0.0	4	0.1	0	0.0
Walk or jog	34	1.3	51	2.1	34	1.3	35	1.3	44	1.5	49	1.7
<b>Total:</b>	<b>2,548</b>	<b>100%</b>	<b>2,487</b>	<b>100%</b>	<b>2,591</b>	<b>100%</b>	<b>2,625</b>	<b>100%</b>	<b>2,925</b>	<b>100%</b>	<b>2,925</b>	<b>100%</b>

The primary mode depicts the travel mode a commuter is more likely to use for commuting. However, any secondary mode(s) the commuter uses for getting to and from work may be underestimated. To examine the extent of this possible under-representation, it is necessary to measure every mode commuters use for traveling to and from work in proportion to how often these modes are used. Specifically, each mode a commuter uses for getting to and from work is assigned a percentage corresponding to how often the mode is used relative to total workdays in a typical week. Then, every mode used by all respondents is aggregated to derive the average travel mode. The results indicate that the primary drive alone rate is somewhat overestimated compared to the average drive alone rate, while the share of primary alternative modes is somewhat underestimated compared to the share of average alternative modes. However, the difference is very small - less than one percentage point - due to the fact that most commuters use only one travel mode to commute.

Of all the respondents to the survey, 74 percent always drive alone to work (including always drive-alone commuters who also telecommute part time or are on a compressed work week schedule). This is higher than the 69 percent reported in 1996. Twen-

ty-six percent use some form of alternative transportation (excluding always drive-alone commuters who also telecommute or are on a compressed work week schedule) either part or all of the time. This is broken down further to include the percent of commuters who rideshare full-time (3 or more days a week) (22%) and the percent of commuters who rideshare part-time (1 or 2 days a week) (4%). These figures are all lower than the findings in 1996 (31%, 24%, and 7% respectively).

In a separate question, 13 percent of current drive-alone commuters indicated that they had regularly carpooled, vanpooled or used transit within the past year. This is slightly lower than the 15 percent reported in 1996 but still higher than the 10 percent reported in 1994. When former ridesharers were asked why they quit their arrangement, 22 percent cited that their work schedule changed, 20 percent claimed that they got a car or got their car fixed, 10 percent cited that they had changed jobs or work site locations, and 9 percent reported that they needed their vehicle at or after work. About 8 percent reported that it took too much time.

## 2.3 COMMUTING DISTANCE

According to the 1998 survey, the average self-reported distance to work is 16.1 miles, and the

TABLE 2.2

ONE-WAY COMMUTING DISTANCE												
	1991		1992		1993		1994		1996		1998	
Distance	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Under 5 miles	537	22%	515	23%	544	22%	620	24%	578	20%	577	20%
5 to 9 miles	503	20	405	18	579	23	490	19	570	20	580	20
10 to 14 miles	415	16	348	16	425	17	389	15	499	17	498	17
15 to 19 miles	260	10	245	11	239	10	241	10	349	12	295	10
20 to 24 miles	214	8	190	9	212	9	195	8	267	9	288	10
25 to 29 miles	145	6	123	6	107	4	155	6	144	5	169	6
30 to 34 miles	137	6	111	5	117	5	163	6	148	5	115	4
35 to 39 miles	87	3	56	3	58	2	79	3	77	3	116	4
40 to 44 miles	61	2	46	2	63	3	47	2	54	2	109	4
45+ miles	180	7	156	7	125	5	185	7	204	7	160	5
Total:	2,539	100%	2,195	100%	2,469	100%	2,564	100%	2,891	100%	2,907	100%

median distance, 11.0 miles. (A median is the distance or other characteristic being measured for which exactly half the values are larger, and half are smaller.) This finding is consistent with findings from surveys conducted in all previous years with the exception of 1993 when the average distance to work dipped to 14.8 miles (see Table 2.12 on page 15). Trip distances to work ranged from one mile to 150 miles. The average commute distance is significantly higher than that based on the 1990 Census data partly due to the difference in definition of workers between the State of the Commute Survey and the 1990 Census. The State of the Commute Survey includes only commuters who are 18 years or older and work outside their home 35 hours or more in a week. Part-time workers are not included in this study.

Table 2.2 shows frequency distribution of one-way commute distance from 1991 through 1998.

## 2.4 COMMUTING TIME TO AND FROM WORK

It takes respondents to the 1998 survey an average of 32 minutes to get to work, with a median of 25 minutes. The mean time for the trip home is 37 minutes, with a median of 30 minutes. With the exception of the shorter median travel time to work, commuting times to and from work are consistent with results of the 1993, 1994, and 1996 surveys

but represents a significant decrease in travel time from the 36 minutes to work and 40 minutes home reported in 1992 (see Table 2.12 on page 15). Tables 2.3 and 2.4 show the frequency distribution of commute time to and from work respectively from 1991 to 1998.

A conservative approach was taken beginning in 1990 for estimating trip time. Responses of those who reported making side trips were eliminated since stops along the way prolonged the time it took to make the trip and the duration of these stops was not captured in the survey. Furthermore, those who report an average travel speed of more than 75 miles per hour or traveling more than three hours to get to work or more than four hours to get home from work were not included in the calculation. This same approach was used in subsequent years.

Because of the keen interest in the travel time issue, two sets of different questions were asked regarding travel time. In the first set of questions, commuters were asked what time they left home for work, what time they arrived at work, what time they left work for home, and what time they arrived at home the day of the survey. The commuting times reported in the first paragraph of this section are based on this set of questions. In the second set of questions, commuters were asked how many minutes it takes them to travel to work and return home, implying usual activity. Commuters report that it usually takes them 28 minutes to get to work, with a medi-

TABLE 2.3

COMMUTING TIME FOR TRIP TO WORK												
	1991		1992		1993		1994		1996		1998	
Trip Time	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
0 to 14 min.	366	18%	308	16%	351	17%	445	22%	471	23%	319	15%
15 to 29 min.	650	32	555	29	667	33	583	30	668	32	781	36
30 to 44 min.	446	22	465	25	442	22	479	24	437	21	564	26
45 to 59 min.	237	12	177	9	230	11	178	9	230	11	167	8
1 hr. to 1:14	153	8	194	10	216	10	164	8	107	5	181	8
1:15 to 1:29	45	2	60	3	50	2	49	3	62	3	45	2
1:30 to 1:44	65	3	50	3	56	3	54	3	60	3	58	3
1:45 to 1:59	17	1	16	1	17	1	8	0	18	1	15	1
2 hours or more	47	2	71	4	21	1	28	1	28	1	26	1
Total:	2,026	100%	1,896	100%	2,050	100%	1,988	100%	2,083	100%	2,156	100%

TABLE 2.4

COMMUTING TIME FOR TRIP HOME												
	1991		1992		1993		1994		1996		1998	
Trip Time	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
0 to 14 min.	244	13%	237	14%	221	12%	266	16%	355	19%	245	12%
15 to 29 min.	503	28	428	25	536	30	454	28	531	28	598	30
30 to 44 min.	412	23	446	26	459	26	419	25	415	22	510	25
45 to 59 min.	223	12	189	11	193	11	146	9	287	15	220	11
1 hr. to 1:14	226	12	181	10	197	11	194	12	109	6	247	12
1:15 to 1:29	70	4	62	3	53	3	52	3	56	3	66	3
1:30 to 1:44	69	4	81	5	68	4	50	3	83	4	57	3
1:45 to 1:59	9	1	21	1	11	1	9	1	21	1	23	1
2 hours or more	51	3	86	5	40	2	47	3	46	2	53	3
Total:	1,807	100%	1,731	100%	1,778	100%	1,637	100%	1,902	100%	2,019	100%

an of 20 minutes, and 32 minutes to return home, with a median of 25 minutes. Obviously, these self-reported times are considerably less than the calculated times reported in the first paragraph of this section. However, self-reported times by commuters are consistent with last year's results.

## 2.5 WORK PLACE ARRIVAL AND DEPARTURE TIMES

Arrival and departure time results from the 1998 survey are compared with previous survey results in

Tables 2.5 and 2.6.

Arrival time before 6 a.m. includes all those who report to work after midnight. The share of commuters arriving at work after 10 a.m. is slightly lower this year than in 1996 but is still higher than the previous survey findings. The mean arrival time at work is 8:35 a.m., with a median arrival time at 7:50 a.m. In 1996, the mean arrival time at work is 8:31 while the median arrival time was 8:00 a.m.

Overall, departure times are consistent with previous

TABLE 2.5

ARRIVAL TIME AT WORK												
Time (A.M.)	1991		1992		1993		1994		1996		1998	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Before 6:00	209	8%	176	8%	156	6%	263	10%	260	9%	246	9%
6:00 to 6:29	150	6	122	5	137	6	118	5	135	5	154	5
6:30 to 6:59	250	10	213	9	265	11	248	10	271	9	290	10
7:00 to 7:29	313	12	277	12	311	12	269	11	382	13	389	13
7:30 to 7:59	376	15	383	16	385	16	372	15	408	14	465	16
8:00 to 8:29	380	15	374	16	427	17	363	14	457	16	407	14
8:30 to 8:59	278	11	220	9	282	11	253	10	265	9	301	10
9:00 to 9:29	164	6	168	7	158	6	211	8	178	6	173	6
9:30 to 10:00	100	4	112	5	128	5	107	4	100	3	65	2
After 10:00	336	13	317	13	250	10	346	13	462	16	434	15
Total:	2,556	100%	2,362	100%	2,499	100%	2,550	100%	2,917	100%	2,925	100%



TABLE 2.6

DEPARTURE TIME FROM WORK												
	1991		1992		1993		1994		1996		1998	
Trip Time (P.M.)	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Before 3:00	381	15%	369	16%	356	15%	432	17%	464	16%	459	16%.
3:00 to 3:29	183	7	174	7	171	7	165	7	198	7	165	6
3:30 to 3:59	253	10	212	9	157	6	174	7	266	9	241	8
4:00 to 4:29	305	12	275	12	282	11	278	11	341	12	374	13
4:30 to 4:59	334	13	285	12	351	14	319	13	311	11	323	11
5:00 to 5:29	454	18	449	19	449	18	441	18	450	15	515	17
5:30 to 5:59	205	8	182	8	203	8	212	8	265	9	182	6
6:00 to 6:29	171	7	171	7	193	8	212	8	213	7	229	8
6:30 to 7:00	104	4	106	5	157	6	131	5	114	4	120	4
After 7:00	162	6	120	5	173	7	150	6	294	10	317	11
Total:	2,552	100%	2,343	100%	2,492	100%	2,514	100%	2,917	100%	2,925	100%

survey findings, with the exception of an increase in the share of commuters departing work after 7 p.m. in 1996 and 1998. The mean departure time from work was 4:17 p.m., with a median departure time of 4:30 p.m. In 1996, the mean departure time from work was 4:13 while the median departure time from work was the same 4:30 p.m.

## 2.6 PARKING

Ninety-four percent of area commuters receive free parking at their work site. This is consistent with findings from previous surveys. The employee's share of parking costs is illustrated in Table 2.7.

As can be seen by the consistency in the findings over the years, free parking in the region is still abundantly available.

Of the employees who pay for parking, 51 percent pay less than \$40 per month. The distribution of parking fees paid by employees is found in Table 2.8.

Respondents to the 1998 survey who pay for parking pay an average of \$63.28 per month; the median is \$35. This represents a significant increase from the average monthly parking fees reported in 1996

(\$53.91) but is in line with those reported in 1994 (\$69.75) and 1993 (\$65.91). Note that the size of samples upon which the parking fees are estimated is small (ranging from 123 to 208 respondents), resulting in a higher sampling error of  $\pm 6.9$  to  $\pm 9.8$  percent at a 95 percent confidence level.

## 2.7 FREEWAY BEHAVIOR

Fifty-five percent of all participants travel on a freeway as part of their commute. This is slightly lower than the 60 percent reported in 1996 but is consistent with figures reported in 1994 (55%), 1993 (56%), and 1992 (53%).

## 2.8 ALTERNATE ROUTE USAGE

Respondents were asked if they ever change their usual route and take an alternate route when traffic is jammed. Sixty-seven percent report that they do take alternate routes. If radio traffic reports included alternate route information in their broadcasts, 43 percent of the respondents report they would be very likely, and an additional 21 percent would be somewhat likely, to use the alternate route. Nineteen percent claim that they would be very unlikely to

TABLE 2.7

EMPLOYEE SHARE OF PARKING COST												
Monthly Fee												
Paid by	1991		1992		1993		1994		1996		1998	
Employee	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
All	100	4%	74	3%	118	4%	129	5%	116	4%	124	4%
Some	87	3	57	3	71	3	64	3	91	3	56	2
None	2,377	93	2,221	94	2,397	93	2,335	92	2,686	93	2717	94
Total:	2,564	100%	2,352	100%	2,586	100%	2,528	100%	2,893	100%	2,897	100%

TABLE 2.8

EMPLOYEE PARKING FEES												
Monthly Fee												
Paid by	1991		1992		1993		1994		1996		1998	
Employee	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
\$1 to \$39	63	49%	75	61%	74	44%	62	34%	82	39%	89	51%
\$40 to \$79	39	31	31	25	50	29	71	37	97	47	42	24
\$80 or more	25	20	17	14	45	27	54	29	29	14	44	25
Total:	127	100%	123	100%	169	100%	187	100%	208	100%	175	100%

TABLE 2.9

INCIDENCE OF STOPPING ON WAY TO WORK OR HOME					
	1992	1993	1994	1996	1998
Stopped on Way to Work	19%	20%	22%	25%	23%
Stopped on Way Home	24	29	34	32	28
Stopped on Way to Work or Home (Net)	36	40	45	44	40

take the alternate route. This represents a further increase from previous years in the percent who claim that they would be unlikely to take the alternate route. Fifteen percent in 1996 and only 12 percent in 1994 claimed that they would be very unlikely to take the alternate route.

## 2.9 SIDE TRIPS TAKEN BEFORE AND/OR AFTER WORK

Nearly one-fourth (23%) of all respondents report that they made a stop on the way to work the day they were surveyed. This is slightly lower than the 25 percent reported in 1996. Of these, 82 percent

made one stop, 14 percent made two stops and 4 percent made three or more stops.

The most significant reasons for the stops include;

- ◆ To eat (31%);
- ◆ To take a child to day care or school (28%);
- ◆ To buy gasoline (16%);
- ◆ To pick up or drop off carpool/vanpool partner/change mode (14%).

With respect to the return trip home, 28 percent of the respondents report that they made a stop on the way home the day they were surveyed. This is lower

than the 32 percent reported in 1996 and 34 percent reported in 1994 but in line with the 29 percent reported in 1993. Of those making stops, 77 percent made one stop, 16 percent made two stops and only 7 percent made three or more stops. The most significant reasons for the stops include:

- ◆ To buy groceries/go shopping (32%);
- ◆ To pick up a child from day care or school (20%);
- ◆ To pick up or drop off a carpool/vanpool partner/change travel mode (12%);
- ◆ To buy gasoline (9%)

More commuters make stops on their trip home than they do on their trip to work (28% vs. 23%) (see Table 2.9).

## **2.10 AVAILABILITY OF VEHICLE FOR GETTING TO WORK**

Eighty-eight percent of all respondents report always having a vehicle available for getting to work. Eight percent claim a vehicle is sometimes available, and 3 percent state they never have a vehicle available. This is consistent with data from previous surveys. The mean number of motorized vehicles (including automobiles, trucks, vans, and highway motorcycles owned or leased) per household is 2.5; the median is 2.0.

## **2.11 NEED FOR VEHICLE DURING THE WORK DAY**

Twenty-four percent of the respondents claim they need their vehicle at work five days or more per week for business purposes, slightly higher than the 22 percent reported in 1996 but significantly lower than the 30 percent reported in 1994. Another 59 percent claim they don't need their vehicle at work at all for business purposes (about the same as reported in 1996). The remaining 17 percent are dispersed as to the number of days they need their vehicle at work for business purposes.

Similarly, 15 percent of all respondents claim they need their vehicle at work five or more days per week for personal reasons. This is lower than the 17 percent reported in 1996 and the 19 percent reported in 1994. Fifty-eight percent claim they don't need

their vehicle at work at all for personal reasons, up from 55 percent reported in 1996 and 50 percent in 1994. The remaining 27 percent are dispersed as to the number of days they need their vehicle at work for personal reasons.

The average number of days a week commuters need their vehicle at work for either business or personal reasons is 2.3. Even for those in senior management and construction, where the need for a vehicle is higher, ridesharing one day a week can still be a viable option.

Forty-two percent of all respondents claim they don't need their vehicle at work at all for either business or personal reasons. This is about the same as the 41 percent reported in 1996 and significantly higher than the 32 percent reported in 1994.

## **2.12 PARK AND RIDE LOT USAGE**

Four percent of the respondents reported using a park and ride lot during the past week in their commute to work. This figure was the same in 1996 and 6 percent in 1994.

## **2.13 CARPOOL<sup>1</sup> AND VANPOOL<sup>2</sup> CHARACTERISTICS**

Persons who report that they commute in carpools or vanpools one or more days per week were asked how many people they pool with and their relationship to those people. The average carpool size is 2.5 persons, including the respondent. This data is comparable to previous studies. The average vanpool size is 7.0 persons. In 1996 and 1994, the average vanpool size was 7.8 persons, in 1993, 8.8 persons, and in 1992, 10.4 persons representing a decline in vanpool size over the past six years. On average, carpools report a commute distance of 19.0 miles and vanpoolers, 25.3 miles.

When asked to describe their relationship with carpool partners, commuters indicate that 37 percent of fellow poolers are co-workers (see Table 2.10). Although still a considerable percentage, this figure is significantly lower than the 45 percent reported in 1996. The figure was 47 percent in 1994, 42 percent in 1993, and 37 percent in 1992. The negative impact of air quality deregulation on employer trans-

<sup>1</sup> Based on 582 respondents, representing a sampling error of about  $\pm 4.0\%$  at 95% confidence level.

<sup>2</sup> Based on 35 respondents. The sampling error is too high for the results to be of any statistical significance. Findings are presented here for informational purposes only.

TABLE 2.10

RELATIONSHIP TO PERSONS WITHIN CARPOOL OR VANPOOL												
Relationship	1991		1992		1993		1994		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Household Members	229	53%	222	43%	211	42%	198	39%	319	49%	318	55 %
Non-household Relatives	26	6	33	6	16	3	13	3	17	3	42	7
Co-Workers (Non-Matchlist)	109	26	165	32	181	36	202	40	265	41	187	32
Co-Workers (Matchlist)	32	8	25	5	28	6	35	7	27	4	29	5
Friends, Neighbors (Non-Matchlist)	45	11	51	10	58	12	66	13	50	8	41	7
Friends, Neighbors (Matchlist)	19	4	20	4	20	4	17	3	4	1	9	2
Someone from Matchlist	15	4	2	0	2	0	1	0	8	1	2	0
Total:	475	112%*	397	100%	516	103%*	532	105%*	690	107%*	582	108%*

\* Total exceeds 100% because respondents were permitted more than one response.

portation programs recently may have contributed to the relative decline of co-worker carpools. However, co-worker carpools are still more likely at the larger work sites. Thirty-eight percent of carpools are made up of co-workers at sites with 100 or more employees as opposed to 32 percent at sites with fewer than 100 employees.

Carpooling with household members is the most common type of arrangement (55%), higher than the 49 percent reported in 1996. A new question was added in 1993 to determine more about household members. Of those who report carpooling with household members, 79 percent report that the household member is older than 16 years of age. (Due to a high number of respondents pooling with household members, there is the potential problem of underestimating alternative mode usage in surveys of this type if respondents are not explicitly reminded that carpooling with one's spouse is still a carpool.)

Friends and neighbors account for 9 percent of carpool partners, and non-household relatives, 7 percent. Those respondents who mentioned that they ride with co-workers or friends and neighbors were further asked if these were originally names of people from a matchlist. Those who report that their partners were someone from a matchlist represent 7 percent of pooling members. This figure was 6 percent in 1996 and 10 percent in 1994. The relationship to persons within the pooling arrangement is detailed in Table 2.10.

Because people who find co-workers to carpool with are likely to regard them as co-workers first, and "persons from a matchlist" second, an additional probing question was asked beginning in 1990.

The distinction between co-worker carpools and family and friend carpools is important to note given the difference in commute characteristics between these two groups. These characteristics are

TABLE 2.11

## PRIMARY DIFFERENCES BETWEEN CO-WORKER AND FRIEND/FAMILY CARPOOLS\*

	Co-Worker Carpools	Friend/Family Carpools
Commute Distance (average one-way miles)	22	17.7
Use Freeway	71%	61%
Use HOV lanes (if available)	37%	23%
Months Carpooling (average)	25	31
Most Important Mode-Choice Factor:	68 cases	116 cases
Travel Time	32%	25%
Cost/Save Gas	11%	20%
Convenience/Flexibility	9%	20%
Employer Offers Money to Ridesharers	16%	14%
Heard/Seen/Read Rideshare Advertising in Past 12 Months	45%	57%
Heard of 1-800-Commute	29%	41%
Company Size:		
Under 100 Employees	53%	64%
100 Employees and over	47%	36%
Household Income:		
Under \$50,000	48%	56%
\$50,000 and Over	52%	43%
Gender: Male	60%	42%
Ethnicity:		
White, non-Hispanic	39%	36%
Hispanic	42%	42%
African-American	11%	8%
Asian	4%	11%
Other	4%	3%
<b>Base:</b>	<b>186</b> <b>(6.3%)</b> <b>of the sample</b>	<b>361</b> <b>(12.3%)</b> <b>of the sample</b>

\*Carpools composed of both co-workers and friends/family were considered co-worker carpools.

highlighted in Table 2.11.

A new question was added in 1993 to determine where carpool partners meet. Sixty-six percent report that whoever drives picks up the others at home, 13 percent meet at a central location, 11 percent drive to the driver's home and 6 percent live close enough to walk to the driver's home.

Seventy-seven percent of carpools claim they don't have to travel out of their way to link up with other partners. This figure was 73 percent in 1996 and 77 percent in 1994. Of those who do travel out of their way (23%), the average distance is 5.4 miles. Eighty-six percent of carpools claim they don't have to travel out of their way at the work end because of their carpool arrangement. Of those who do travel out of their way (14%), the average distance is 3.1 miles.

While the number of vanpoolers identified in the survey is too few to accurately assess trends, findings are reported to provide a general description of vanpooler characteristics. Vanpoolers are the most likely to pool with co-workers (85%). In 1993, a new question was added to determine where vanpool partners meet. Fifty-three percent meet at a central location while 43 percent are picked up by the driver at their home.

As a group, 20 percent of African-Americans carpool to work on a full-time basis as opposed to 18 percent of Hispanics, 14 percent of Asians, and 11 percent of Whites (not of Hispanic origin).

Those who work at aerospace firms, those with household incomes less than \$20,000 and those less than 20 years of age are the most apt to carpool on a full-time basis.

Respondents report being in their current carpool an average of 29 months and a median of 12 months. Fifty percent claim to be in their current carpool one year or less. Part-time carpoolers have been in their most recent carpool less time than full-time carpoolers (24 months vs. 31 months).

Respondents report being in their current vanpool an average of 28 months and median of two years. Twenty-three percent claim to be in their current vanpool one year or less.

Those who began ridesharing within the past year were asked about prior travel modes. More than six out of ten (61%) who began ridesharing during the past year previously drove alone. Fourteen percent carpooled, 9 percent did not work prior to ridesharing, 7 percent took the bus, and 5 percent walked.



Those who began ridesharing within the last year were asked what motivated them to begin to rideshare. Twenty-eight percent of the respondents claim they began ridesharing to save money, 14 percent report personal vehicle problems, 12 percent report that they found someone living and working close by, and 7 percent claim that a co-worker suggested the idea.

## 2.14 CHARACTERISTICS OF BUS RIDERS<sup>1</sup>

Those who report traveling to work on a bus, either public or private, at least one day per week, were asked how long they have been riding the bus. Bus riders claim to have been riding the bus an average of 53 months (4.4 years) and a median of two years. Sixty-eight percent report riding the bus two years or less, whereas 12 percent report riding the bus 10 years or more. Eighty-two percent of bus riders report using the bus five or more days a week to get to work. The average trip distance for bus riders is 13.6 miles.

Eight percent of Hispanics ride the bus to work three or more days a week, followed by 7 percent of African-Americans, and one percent each of Whites (not of Hispanic origin) and Asians.

Those who do not currently use the bus were asked if there was a bus that they could take to get to work. Forty-eight percent of these commuters believe there is a bus they could take to get to work. This figure was 32 percent in 1996, 39 percent in 1994 and 45 percent in 1993. The percent of commuters aware of an available bus increased substantially from 1996 to 1998 after a significant downward trend from 1993 through 1996.

## 2.15 MAJOR DIFFERENCES BETWEEN THE FULL-TIME<sup>2</sup> AND PART-TIME<sup>3</sup> RIDESHARER

Compared to the full-time (three or more days a week) ridesharer, the part-time (one or two days a week) ridesharer faces a similar commute distance (17.5 miles for full-time ridesharers and 17.1 for part-time ridesharers) but longer commuting time each day (79 minutes vs. 84 minutes). Part-time ridesharers have a greater need for a vehicle at work for either business or personal reasons one or more days a week (76% vs. 38%). Part-time ridesharers

<sup>1</sup> Based on 112 respondents, representing a sampling error of about  $\pm 10\%$  at 95% confidence level. Caution should be used in determining the characteristics of bus riders given the small sample of bus riders surveyed.

<sup>2</sup> Based on 634 respondents, representing a sampling error of about  $\pm 4.0\%$  at 95% confidence level.

<sup>3</sup> Based on 132 respondents, representing a sampling error of about  $\pm 9.0\%$  at 95% confidence level.

are more likely than full-time ridesharers to always have a vehicle available to get to work (89% vs. 68%); and they are more likely to have more than one job (32% vs. 15%).

Part-time ridesharers have been at their current work location for a longer amount of time than full-time ridesharers (76 months vs. 50 months). Occupationally, part-time ridesharers are more apt to be professional or sales/service workers (both 27%). Full-time ridesharers are also more apt to be professional (24%) or sales/service workers (25%).

Ethnically, part-time ridesharers are more apt than full-time ridesharers to be White (not of Hispanic origin) (44% vs. 33%) and less likely to be Hispanic (35% vs. 50%). Part-time ridesharers are equally likely as full-time ridesharers (both 73%) to be aware of at least one transportation incentive at their work site). Part-time ridesharers are almost as likely to use financial incentives offered by their employer as full-time ridesharers (44% vs. 48%).

The most important mode choice factor is convenience for part-time ridesharers (23%) and travel time to work for full-time ridesharers (29%). Factors much more significant to the part-time

ridesharer than the full-time ridesharer include travel mode reliability/dependability (20% vs. 13%), not being dependent on others (11% vs. 1%), and work hours or schedules (6% vs. 2%). However, the full-time ridesharer is much more concerned than the part-time ridesharer about commuting costs (11% vs. 6%). These differences mark the full-time ridesharer and the part-time ridesharer as distinct markets.

## **2.16 SUMMARY OF DIFFERENCES BETWEEN THE 1998 SURVEY AND PREVIOUS SURVEYS**

Commuters in 1998 travel relatively the same distances to work as their counterparts did in 1991, 1992, 1994, and 1996 and are taking about the same amount of time to make the trip. The drive-alone rate has been fairly consistent over the last eight years. Table 2.12 presents a summary of measures from previous annual surveys. Table 2.13 highlights the differences in commuting characteristics between regular drive-alone commuters<sup>1</sup> and car-poolers<sup>2</sup>.

<sup>1</sup> Based on 2,313 respondents, representing a sampling error of about  $\pm 2.0\%$  at 95% confidence level.

<sup>2</sup> Based on 373 respondents, representing a sampling error of about  $\pm 5.0\%$  at 95% confidence level.

TABLE 2.12

SUMMARY OF MEASURES ACROSS SURVEYS						
Measure	1991	1992	1993	1994	1996	1998
Percentage of Solo Drivers (including motorcyclists)	79%	77%	79%	81%	76%	77%
Mean Distance to Work (miles)	16.6	16.6	14.8	16.5	16.5	16.1
Median Distance to Work (miles)	10.0	10.0	10.0	10.0	12.0	11.0
Mean Time to Work (minutes)	33	36	33	31	33	32
Median Time to Work (minutes)	27	30	30	25	30	25
Mean Time to Home (minutes)	38	40	36	36	37	37
Median Time to Home (minutes)	30	30	30	30	30	30
Modal Arrival Time at Work During Peak Hours	7:30 to 8:29 a.m.	7:30 to 8:29 a.m.	8:00 to 8:29 a.m.	7:30 to 7:59 a.m.	8:00 to 8:29 a.m.	7:30 to 7:59 a.m.
Modal Departure Time from Work During Peak Hours	5:00 to 5:29 p.m.	5:00 to 5:29 p.m.	5:00 to 5:29 p.m.	5:00 to 5:29 p.m.	5:00 to 5:29 p.m.	5:00 to 5:29 p.m.
Percentage of Commuters Receiving Free Parking	93%	94%	93%	92%	93%	94%



TABLE 2.13

**SUMMARY COMPARISON OF PRIMARY  
DRIVE ALONE COMMUTERS AND CARPOOLERS**

	<b>Drive Alone Commuters</b>	<b>Carpool Commuters</b>
Trip Distance (average)	15.7 miles	19.4 miles
Trip Time to Work (average)	31 minutes	32 minutes
Trip Time to Home (average)	35 minutes	40 minutes
At Work Before 8:00 a.m.	52%	54%
Make Stops on Way to Work	22%	38%
Make Stops on Way Home	28%	37%
Receive Free Parking	95%	87%
Average Parking Price Paid/Month	\$55.59 (114 cases)	\$77.40 (55 cases)
Employer Size		
• Less than 25 Employee	38%	33%
• 100 Employees or more	35%	39%
Need Vehicle at Work for Business/Personal Reasons	63%	52%
Days Per Week Need Vehicle at Work (average)	2.6 days	1.8 days
Occupation		
• Production	8%	11%
• Secretarial	11%	14%
• Professional	29%	23%
• Maintenance	5%	8%
Industry		
• Manufacturing	16%	22%
• Service, Entertainment	17%	24%
Household Income		
• Less than \$20,000	13%	17%
• More than \$80,000	22%	21%
Ethnicity		
• White	53%	38%
• Hispanic	32%	43%
• Asian	9%	8%
• African-American	6%	8%
Vehicle Always Available	95%	78%
Heard of 1-800-COMMUTE	35%	39%
Would Availability of HOV Lanes Encourage You to Rideshare?	48%	73%
Commuting Costs as Mode Choice Factor	4%	18%
"Convenience" Defined as:		
"Don't Have to Plan Ahead"	21%	9%
"Reliability/Dependability"	8%	12%

# 3 Demographic Characteristics

## 3.1 INTRODUCTION

To better understand regional commuters, it is not only important to know about their overall travel behavior but also the composition of the commuter groups and their travel behaviors. In many instances, differences in commute behavior may be a result of differences in demographics. Significant differences between groups of people are highlighted throughout this document. By realizing these differences, marketing strategies can be targeted so that the most effective messages are delivered to the appropriate audiences. This chapter reports on travel behaviors by gender, age, income, ethnicity, and employer site size. Additional demographic characteristics of regional commuters are also reported at the end of this chapter.

The sampling errors associated with the summary statistics of demographic groups in this chapter depend on the sample size of these groups. Table 3.1 below lists sampling errors by sample size at a 95 percent confidence level.

However, it is important to note that the sampling errors associated with any sub-samples of the overall sample may not be estimated accurately since these sub-samples are formed based on demographic char-

acteristics and may not be representative of their respective populations. Their actual sampling errors are likely to be higher than those shown in Table 3.1.

## 3.2 TRAVEL BEHAVIOR BY GENDER

**Gender Distribution** Respondents to the 1998 survey are 54 percent male and 46 percent female. [Note: According to the 1990 U.S. Census, 56.8 percent of workers (16 years of age and over) are male and 43.3 percent are female]. Overall these results are consistent with findings from previous surveys (see Table 3.2).

**Primary Travel Mode** Men are somewhat more likely than women to drive alone to work on a regular basis (79% vs. 76%) and are less likely than women to carpool to work (13% vs. 16%).

**One-way Commute Distance** On average, men travel longer distances than women to get to work (17.5 miles vs. 14.5 miles). In looking at the greatest trip distances - 7 percent of men travel more than 45 miles to work while only 4 percent of women do so. Men are also more likely than women to travel more than 25 miles to work (28% vs. 18%).

TABLE 3.1

SAMPLING ERRORS BY SAMPLE SIZE											
Sample Size	100	200	300	400	600	800	1000	1500	2000	2500	3000
Sampling Error (%)	9.8	6.9	5.6	4.9	4.0	3.5	3.1	2.5	2.2	1.9	1.8

Source: Calculated based on a formula in Douglas Downing & Jeffrey Clark, Business Statistics, 2nd edition, Barron's Business Review Series, 1992, p. 226

TABLE 3.2

GENDER DISTRIBUTION												
Gender	1991		1992		1993		1994		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Female	1,209	47%	1,186	47%	1,274	49%	1,199	46%	1,350	46%	1,354	46%
Male	1,360	53	1,326	53	1,317	51	1,426	54	1,575	54	1,571	54
Total:	2,569	100%	2,512	100%	2,591	100%	2,625	100%	2,925	100%	2,925	100%

**Commute Time to and from Work** Perhaps as a result of the longer trip distance, men spend, on average, more time than women commuting each day (71 minutes vs. 66 minutes).

**Full-time and Part-time Ridesharing** Women are more likely to be full-time (three or more days a week) ridesharers (24% vs. 20%) than men. But there is little difference in terms of part-time ridesharing (one or two days a week) between men and women (4% vs. 5%).

**Motivation to Rideshare** Men were much more likely to cite cost savings (40% vs. 16%), car problems (18% vs. 10%), and environmental reasons (9% vs. 4%) as a motivation for ridesharing. Women were



more likely than men to report that "better parking" (10% vs. 0%), "found someone living and working close by" (14% vs. 8%), and availability of new options such as new bus route or train (11% vs. 5%) motivated them to rideshare.

**Consideration of Alternative Modes** When those individuals who always drive alone were asked whether they would consider ridesharing alternatives, women were more open to carpooling (45% vs. 38%), vanpooling (37% vs. 30%), and walking (30% vs. 26%) than men. Both men and women were equally likely to consider bus (15% vs. 16%) and biking (24% vs. 23%) as travel alternatives.

**Freeway Usage** Perhaps due to the longer trip distances, men are much more likely than women to travel on a freeway during their commute to work (59% vs. 51%).

**HOV Lane Usage** Women are more likely than men to utilize HOV lanes (76% vs. 63%) maybe because women are more likely to be full-time ridesharers than men.

**Make Stop(s) on Way to Work or Home** Women are more likely than men to make stops on the way to or from work. Of those making stops on the way to work, 13 percent of men made more than one stop, while 22 percent of women did so. Reasons for the stops differ between the sexes. Of those making stops on the way to work (representing 21% of men and 26% of women), women are much more likely than men to stop to take a child to day care or school (41% vs. 14%), while men are more likely to stop to eat (43% vs. 19%), pick up/drop off a rideshare partner (16% vs. 12%), or buy gasoline (19% vs. 13%). Of those who make stops on the way home (representing 36% of women and 22% of men), 15 percent of men made more than one stop while 28 percent of women did so. Women are more apt than men to pick up a child from day care or school (25% vs. 13%), go shopping/buy groceries (34% vs. 29%), go to cleaners/hairdresser/doctor/dentist (7% vs. 1%), while men are more likely to stop to eat (14% vs. 6%) or buy gasoline (12% vs. 7%).

**Vehicle Availability** Men are more likely than women to report always having a vehicle available for commuting purposes (92% vs. 86%).

**Change Work or Home Location due to Commute Distance** Women are more likely than men to cite commute distance as a factor for changing work location (22% vs. 16%) but are less likely to cite commute distance as a factor for changing home location (15% vs. 19%).

### 3.3 TRAVEL BEHAVIOR BY AGE

**Age Distribution** 60 percent of the respondents were under 40 years of age, the same as reported in 1996 but reflecting an older audience than in previous years. The age distribution for respondents to each of the surveys is presented in the Table 3.3. The original six age categories are regrouped into four categories so that each category has a similar number of respondents to allow for more meaningful breakdown analysis. About 31 percent of all commuters are under 30 years, 29 percent are between 30 and 39, 22 percent are between 40 and 49, and 18 percent are 50 years or older.

**Primary Commute Mode** On average, the older a commuter is, the more likely the commuter drives alone to work (ranging from 68% for commuters less

than 30 years of age to 86% for commuters 50 years of age or older) and the less likely the commuter car-pools to work (ranging from 21% for commuters less than 30 years old to only 8% for commuters 50 years or older).

**One-way Commute Distance** On average, the one-way commute distance is the longest for the 40-49 year age group (18 miles), and the shortest for the under 30 age group (14 miles).

**Commute Time to and from Work** Perhaps as a result of the shorter commute distance, the youngest group spends less time commuting each day (62 minutes) than the other three age groups (69 to 74 minutes).

**Full-time and Part-time Ridesharers** On average, commuters under 30 years of age are the most likely to be full-time ridesharers (31%) while commuters 50 years of age or older are the least likely (12%). There is no significant difference in part-time ridesharing among age groups (3-6%).

**Ridesharing Alternatives for Always Drive-Alone Commuters** The younger the drive-alone commuter, the more likely the commuter would consider carpooling, vanpooling, taking a bus, riding a train, or biking one or two days a week to work. Of all ridesharing alternatives, carpooling is the most preferred across all age groups, ranging from 28 percent for the 50 and over age group to 56 percent for the under 30 age group.

**Make Stop(s) on Way to Work or Home** Commuters in the 40-49 year age group are the most likely to make a stop on the way to work (28%), while the 50 and over age group are the least likely (19%). However, the older the commuter, the more likely the commuter is to make a stop(s) on the way home (ranging from 26% for the under 30 age group to 31% for the 50 and over age group). Of those who make stop(s) on way to work or home, the youngest age group is more likely to make more than one stop.

**Availability of Vehicle to Work** Fewer commuters in the under 30 age group (82%) report that they always have a vehicle available to travel to work than the other three age groups (ranging from 89% to 95%).

**Change Work or Home Location due to Commute Distance** Commuters in the 30-39 age group are the most likely to change their work location because of commute distance while commuters in the 50 and over age group are the least (23% vs. 15%). Commuters in the 40-49 age group are the most likely to change their home location because of commute distance while commuters in the less than 30 age group are the least (24% vs. 15%).

### 3.4 TRAVEL BEHAVIOR BY INCOME

**Distribution of Household Income** Compared to 1996, significantly more individuals in the lowest income category of under \$20,000 were interviewed for the survey (15% vs. 9%). However, the percentage is still in line with results reported in earlier years

TABLE 3.3

AGE DISTRIBUTION												
Age in Years	1991		1992		1993		1994		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Less than 20	111	4%	131	5%	73	3%	110	4%	94	3%	76	3%
20 - 29	817	32	776	31	790	31	810	32	834	28	817	28
30 - 39	814	32	788	32	799	31	776	30	904	31	834	29
40 - 49	479	19	484	20	499	19	479	19	662	23	633	22
50 - 59	239	9	228	9	286	11	242	11	342	12	414	14
60+	85	4	67	3	117	5	91	4	85	3	99	4
Total:	1.207	100%	2.545	100%	2.474	100%	2.564	100%	2.922	100%	2.873	100%

(see Table 3.4). The original seven income categories are regrouped into four categories so that each category has about the same number of respondents to allow more meaningful breakdown analysis. About 35 percent of all commuters have a household income of under \$35,000, 19 percent \$35,000 to \$49,999, 26 percent \$50,000 to \$79,999, and 21 percent \$80,000 or more.

**Primary Commute Mode** The lowest income group of commuters with incomes of under \$35,000 are least likely to drive alone (68%) and most likely to carpool (16%) or take a public bus (10%) to work. The second highest income group of commuters with \$50,000 to \$79,999 are most likely to drive alone (84%) and least likely to carpool (11%) to work.

**One-way Commute Distance** There exists a positive correlation between household income and commute distance. Commuters with a household income of under \$35,000 travel an average one-way commute distance of 13 miles compared to 20 miles for commuters with a household income of \$80,000 or more.

**Commute Time to and from Work** In general, the higher the household income, the longer the daily commute time. The average daily commute time is 67 minutes for commuters with a household income of under \$35,000 and 76 minutes for commuters with a household income of \$80,000 or more.

**Full-time and Part-time Ridesharers** The lowest income group of commuters with under \$35,000 are much more likely to be full-time ridesharers than the other three income groups (32% vs. 15-19%). However, the share of part-time ridesharers is similar across income groups (2-7%).

**Ridesharing Alternatives for Commuters Who Always Drive-Alone Commuters** The lower the household income, the more likely the drive-alone commuter would consider carpooling (from 49% for those with a household income of under \$35,000 to 34% for those with a household income of \$80,000 or more), vanpooling (45% vs. 31%), or taking a bus (25% vs. 13%) to work one or two days a week.

TABLE 3.4

ANNUAL HOUSEHOLD INCOME DISTRIBUTION												
	1991		1992		1993		1994		1996		1998	
Income	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Under \$20,000	308	14%	240	12%	227	10%	258	12%	252	9%	359	15%
\$20,000 to												
\$34,999	483	21	424	21	454	20	439	20	593	22	496	20
\$35,000 to												
\$49,999	545	24	455	23	502	23	513	24	644	23	457	19
\$50,000 to												
\$64,999	372	16	321	16	350	16	335	15	433	16	387	16
\$65,000 to												
\$79,999	193	9	222	11	259	12	223	10	264	10	233	10
\$80,000 to												
\$99,999	158	7	162	8	183	8	176	8	243	9	206	8
\$100,000 and												
over	208	9	173	9	239	11	249	11	308	11	298	12
Total:	2,267	100%	1,997	100%	2,214	100%	2,193	100%	2,737	100%	2,436	100%

Note: Based on face value and does not adjust for inflation.

**Freeway Usage** The higher the household income, the more likely the commuter uses the freeway to travel to work, ranging from 47 percent for commuters with a household income of under \$35,000 to 63 percent for commuters with a household income of \$80,000 or more.

**Make Stop(s) on Way to Work or Home** The lowest income group of commuters with under \$35,000 are less likely to make stop(s) to (17% vs. 21-32%) or from (22% vs. 31-33%) work than the other three income groups.

**Availability of Vehicle to Work** The lowest income group of commuters with under \$35,000 are much less likely to always have a vehicle available to travel to work (76% vs. 94-97%) and much more likely to never have a vehicle available to travel to work (8% vs. 0.0-0.4%) than the other three income groups.

**Change Work or Home Location due to Commute Distance** The lowest income group of commuters with under \$35,000 are more likely to cite commute distance as a factor for changing either work (28% vs. 15-16%) or home location (22% vs. 11-16%) than the other three income groups.

**Heard/Seen/Read and Recalled Advertising for Ridesharing** The higher the household income, the more likely the commuter has heard, seen, or read advertising for ridesharing in the past six months (from 35% to 69%) but the less likely the commuter can recall the advertising message (from 87% to 77%).

### 3.5 TRAVEL BEHAVIOR BY ETHNICITY

**Ethnic Distribution** With regard to ethnicity, respondents identified themselves as being in the categories as listed in Table 3.5. Over the years, representation in the survey by Hispanics has increased significantly while representation by Whites (non-Hispanics) has declined significantly. However, the drop of seven percentage points in Whites (not of Hispanic origin) from 1996 to 1998 and the increase of 10 percentage points in Hispanics during the same period may have exaggerated actual demographic changes due to sampling error. No weighting based on ethnic distribution is applied to the data because (1) the primary travel mode split, the average commute distance, and the average commute time are not significantly affected by the ethnic difference; (2) no such weighting has ever been made to all the previous

TABLE 3.5

Group	ETHNIC GROUP											
	1991		1992		1993		1994		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
White, not Hispanic	1,497	59%	1,427	59%	1,434	57%	1,436	56%	1,621	56%	1378	49%
African-American	244	10	127	5	192	8	224	9	207	7	166	6
Hispanic	577	23	628	26	585	23	632	24	750	26	1013	36
Asian	139	6	179	8	219	9	223	9	245	9	236	8
American-Indian	32	1	31	1	31	1	22	1	33	1	30	1
Other	27	1	22	1	57	2	18	1	35	1	3	0
<b>Total:</b>	<b>2,516</b>	<b>100%</b>	<b>2,414</b>	<b>100%</b>	<b>2,518</b>	<b>100%</b>	<b>2,555</b>	<b>100%</b>	<b>2,891</b>	<b>100%</b>	<b>2,826</b>	<b>100%</b>

survey data; and (3) it is virtually impossible to determine how much of the difference is caused by sampling error or by the true demographic changes.

Only four of the six ethnic groups have a substantial number of respondents that allow for meaningful breakdown analysis. The four major ethnic groups and their percentages of the commuter population are: White, non-Hispanic (49%), Hispanic (36%), Asian (8%), and African-American (6%).

**Primary Commute Mode** White (non-Hispanic) and Asian commuters are more likely to drive alone to work (83% and 80% respectively) than African-American and Hispanic commuters (71% and 69% respectively). African-American and Hispanic commuters (20% and 18% respectively) are more likely to carpool to work than White (non-Hispanic) and Asian commuters (12% and 14% respectively). African-American (7%) and Hispanic (8%) commuters are also much more likely to commute by bus than White (non-Hispanic) and Asian commuters (both 1%).

**One-way Commute Distance** On average, the one-way commute distance is longer for White (non-Hispanic) commuters (17 miles) than for the other three ethnic groups (14-15 miles).

**Commute Time to and from Work** Despite the longer commute distance, White (non-Hispanic) commuters spend less time (66 minutes) commuting each day than the other three ethnic groups (from 68 minutes for Hispanics to 78 minutes for African-Americans).

**Full-time and Part-time Ridesharing** Hispanic and African-American commuters are much more likely to be full-time (three or more days a week) ridesharing (31% and 29% respectively) than their White (non-Hispanic) and Asian counterparts (15% and 20% respectively). About 10 percent of African-American commuters rideshare part-time (one or two days a week) to work, compared to 3-4 percent for the other three ethnic groups.

**Ridesharing Alternatives for Commuters Who Always Drive-Alone** Hispanic drive-alone commuters are most likely to consider commuting by carpool one or two days a week (52%), followed by

Asian (46%), African-American (37%), and White (non-Hispanic) (35%) drive-alone commuters. White (non-Hispanic) drive alone commuters (9%) are much less likely to consider commuting by bus one or two days a week than the other three ethnic groups (20-27%). White (non-Hispanic) drive-alone commuters (12%) are also less likely to consider commuting by train one or two days a week than the other three ethnic groups (17-24%).

**Freeway Usage** Asian commuters are more likely to travel on a freeway during their commute to work than the other three ethnic groups (72% vs. 48-58%).

**Make Stop(s) on Way to Work or Home** African-American commuters are the most likely to make a stop on the way to work while Asian commuters are the least likely (31% vs. 18%). With regard to the trip home, White (not of Hispanic origin) and African-American commuters (both 32%) are more likely to make a stop than Asian and Hispanic commuters (23% and 24% respectively).

**Availability of Vehicle to Work** Hispanic (5.8%) and African-American (5.4%) commuters are more likely to report that they never have a vehicle available to travel to work than White, non-Hispanic (0.8%) and Asian commuters (1.7%).

**Change Work or Home Location due to Commute Distance** Hispanic commuters are the most likely to change either their work (30%) or home (31%) locations because of commute distance while Asian and white, Non-Hispanic Commuters are the least likely (1.7% and 0.8% respectively).

### 3.6 TRAVEL BEHAVIOR BY EMPLOYER SITE SIZE

**Distribution of Employer Site Size** With respect to employer size, 64 percent of the respondents report working at sites with fewer than 100 employees (37% work at sites with fewer than 25 employees and 27% work at sites with 25 to 99 employees) and 36 percent report working at sites with 100 or more employees (15% work at sites with 100-249 employees, 8% work at sites with 250-499 employees, and 13% work at sites with 500 or more employees). In 1996, 63 percent of the respondents reported work-

ing at sites with fewer than 100 employees and 37 percent reported working at sites with 100 or more employees.

**Primary Commute Mode** The drive-alone share is slightly lower at larger companies: 74 percent at sites with 250 or more employees and 77-79 percent at the other three employer site size categories. The carpool share is the highest at sites with 250 or more employees (16%) and the lowest at sites with less than 25 employees (13%).

**One-way Commute Distance** There is a weak positive correlation between one-way commute distance and site size, ranging from 15.5 miles at sites with 25 or fewer employees to 17.5 miles at sites with 250 or more employees.

**Commute Time to and from Work** There is no correlation between daily commuting time and site size.

**Full-time and Part-time Ridesharers** The share of full-time ridesharers is similar across all site sizes (21-23%). However, the share of part-time ridesharers is lower at the smallest sites with less than 25 employees (2%) than at the other three larger sites (4-7%).

**Ridesharing Alternatives for Commuters Who Always Drive-Alone** Drive-alone commuters at the deregulated sites with 100-249 employees are the most likely to consider commuting by carpool (49% vs. 37-43%) or vanpool (38% vs. 30-34%) one or two days a week than drive-alone commuters at the other three site size categories.

**Availability of Vehicle to Work** There is virtually no difference by employer site size in terms of percentage of commuters who report always having a vehicle available for commuting (89-90%). However, commuters at the largest sites with 250 or more employees are less likely to report never having a vehicle available for commuting than the other three site size categories (1% vs. 3-5%).

### 3.7 ADDITIONAL DEMOGRAPHIC CHARACTERISTICS

**Occupation** Collecting information on occupation is difficult because people tend to classify the same kind of job differently. Also, with the multitude of job titles, it is difficult, if not impossible, to make objective direct comparisons. With that caveat, the most frequently cited occupational category is professional (28%). A breakdown of survey responses for occupation is shown in Table 3.6.

TABLE 3.6

OCCUPATION												
Occupation	1991		1992		1993		1994		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Secretarial/ Clerical	305	12%	379	16%	429	17%	362	14%	381	13%	320	11%
Production	362	14	302	13	289	11	235	9	246	8	275	10
Senior Mgt.	154	6	129	5	147	6	142	5	152	5	139	5
Middle Mgt.	302	12	232	10	267	10	275	11	352	12	313	11
Maintenance	115	5	174	7	156	6	142	6	176	6	170	6
Sales/Service	569	22	476	20	504	20	500	19	565	19	648	22
Professional	725	28	559	24	613	24	668	26	748	26	803	28
Construction	NA*		100	4	130	5	153	6	155	5	155	5
Other	21	1	11	1	26	1	108	4	132	5	45	2
Total:	2,553	100%	2,362	100%	2,561	100%	2,585	100%	2,904	100%	2,867	100%

\*NA - Not asked in the 1990 and 1991 surveys.



Construction workers and senior managers are the most likely to drive alone to work (87% and 83% respectively) while maintenance and sales or service workers are the least likely (71% and 74% respectively).

Construction and maintenance workers travel the longest distances to work (25.7 miles and 19.5 miles respectively) while secretarial and production workers travel the shortest distances (14.0 miles and 14.6 miles respectively). As a result of the longest trip distance, construction workers spend much more time commuting each day than secretarial and production workers (102 minutes vs. 51-79 minutes).

**Industry** The top three industries reported by the most respondents are service/entertainment (19%), manufacturing/production (18%), and public administration/government (15%). Like occupation, it is also difficult to collect information on industry type because many companies, large companies in particular, have a variety of businesses that overlap industry categories. As a result, it is also very difficult to make direct comparisons among industries.

By industry type, workers in service/entertainment and manufacturing/production industries are the least likely to drive alone to work on a regular basis (both 70%) while construction and public administration/government workers (89% and 84% respectively) are the most likely to drive alone to work

Employees at sites in construction travel the longest distances to work (25 miles), followed by employees in aerospace (21 miles) and wholesale trade (20 miles); employees at sites in retail trade travel the shortest distances (13 miles), followed by employees in manufacturing/production, finance/banks/insurance/real estate, and public administration/government agencies (all 15 miles).

**Length of Stay at Work Site and Home Residence** Area commuters report working at their current work location an average of 5.9 years. In 1996, the average was 5.7 years.

Twenty-two percent report working at their same location 10 years or more (slightly higher than the 20% reported in 1996 and significantly higher than the 14% reported in 1994). Respondents who have worked at their current location two years or less (40%) were asked what influenced their decision to

change work locations. Commute-related issues were addressed by 26 percent of these individuals as a reason for their change in work location, much higher than the 16 percent reported in 1996. Nineteen percent report that commute distance influenced their decision to change work locations and 5 percent cite the cost of the commute, 3 percent cite traffic congestion, and 1 percent refer to the stress of commute as a reason for a change in work location.

With regard to the length of stay at their home address, respondents were quite varied in their responses. The average stay at their home address was 8.4 years. Thirty-one percent report a length of stay of 10 years or more at the same location. Respondents who have lived at their current location two years or less (31%) were asked what influenced their decision to change home location. Commute-related issues were addressed by 28 percent of these individuals as a reason for the move. This is considerably higher than the 17 percent reported in 1996 and the 15 percent reported in 1994 but about the same as the 23 percent reported in 1993. Seventeen percent claim their commute distance influenced their decision to move, 7 percent cite commute-related costs 3 percent cite traffic congestion, and 2 percent refer to commute stress as the motivating factor in their decision to change home location. Eleven percent cite a job change as the motivating factor in their decision to change home location within the last two years.

**Annual Personal Income** Over one-quarter of commuters (29%) report an annual personal income of under \$20,000, less than one third (30%) \$20,000 to \$34,999, about one-fifth (19%) \$35,000 to \$49,999, and about one-quarter \$50,000 or more (23%).

**Marital Status** More than half of commuters (56%) are married, one-third (34%) are single, 8 percent are divorced and 1 percent are widowed.

**Number of Working Days in a Week** Nearly three-quarters of commuters (74%) work five days a week, 18 percent six or seven days a week, and 8 percent one to four days a week.

**Number of Jobs** Fourteen percent of the commuters hold more than one job.

**Number of Household Motor Vehicles Owned or Leased** Over one-third (38%) report three or more motor vehicles in the household, nearly four in ten

commuters (39%) report two motor vehicles, about one-quarter (22%) cite one motor vehicle, while 1.4 percent report no motor vehicles in their household.

***Availability of a Vehicle to Work*** Nearly nine out of ten commuters (89%) report that a vehicle is always available for going to work, 8 percent report a vehicle is sometimes available while the remaining 3 percent report that a vehicle is never available.

***Availability of a Bus to Work*** More than four in ten commuters (44%) are aware that there is a bus that they could take to get to work; about the same percentage of commuters (42%) report that there is no such bus while the remaining 14 percent do not know whether a bus is available.

# 4 Employer Transportation Programs

## 4.1 INTRODUCTION

An additional objective of this study is to determine commuters' awareness and usage of employer transportation programs at their work sites. Whether in a regulated or unregulated environment, employers have long been considered by many transportation professionals to be the key to successful transportation demand management strategies given that they can implement, promote, market, and monitor various transportation programs at their work site and can reach a large segment of the commuting population with a shared trip destination.

## 4.2 AWARENESS OF EMPLOYER PROGRAMS

Respondents to the survey were asked What their employer does to encourage employees to rideshare? Specific programs were mentioned and respondents were asked whether they were aware that their employer offered such a program. Responses to this question can be found in Table 4.1.

Beginning in 1992 and continuing through 1996, employees were far more aware of transportation programs than they had been in previous years. However, this trend was reversed in 1998: the level of awareness of the vast majority of the 16 transportation programs listed in Table 4.1 dropped from 1996 to 1998. The most dramatic decreases over the last two years occurred in programs directly related to ridesharing assistance. This significant decline in awareness of transportation programs is likely to be a result of (1) weakened regional marketing efforts due to substantial cuts in funding to the regional rideshare programs and (2) elimination or scaling-down of transportation programs by employers, particularly the deregulated employers, in response to recent air quality deregulation.

Twenty-two percent of all respondents report that their employer offers no transportation incentives (listed in Table 4.1) to encourage usage of alternative travel modes. This figure was 18 percent in 1996 and represents the first increase after a steady decline in the percent of employers offering no incentives.

Employees at sites with 100 or more employees were much more likely to say that their employer offered at least one transportation program (87%) than those at sites with fewer than 100 employees (73%). Both figures are slightly lower than those from 1996 (91% and 77% respectively). Employees at regulated sites with 250 or more employees were even more likely to say that their employers offered at least one transportation program (90%).

As can be seen in Table 4.2, awareness of specific employer transportation programs continues to be much greater among employees at large work sites with 100 or more employees than among employees at small sites. This disparity between the large and small firms is not surprising given the fact that sites with 100 or more employees in Los Angeles, Orange, Riverside, and San Bernardino Counties, and sites with 50 or more employees in Ventura County, were mandated (from the late 1980s to 1995) by their local air districts to develop trip reduction programs which would reduce the number of single occupant vehicles arriving at the work site during the morning peak period. Furthermore, regional rideshare agencies devote most of their resources and marketing activities at sites with 100 or more employees. Larger employers are more likely to devote a greater amount of financial and staffing resources toward transportation programs.

However, compared to 1996, there is a drop in awareness of employer transportation programs across all employer site sizes, particularly, at sites with 100 or more employees. At these larger sites, programs that suffered the worst decline in terms of employee awareness include "subsidizes ridesharing" (22% in 1998 vs. 36% in 1996), "has contests/prizes for ridesharers" (27% vs. 47%), "registers employees with rideshare agency" (32% vs. 51%), "assists in forming carpools or vanpools" (55% vs. 71%), "provides bus/rail information on routes and schedules" (32% vs. 43%), and "provides ridesharing information" (63% vs. 77%) (see Table 4.2).

TABLE 4.1

AWARENESS BY EMPLOYEES OF EMPLOYER TRANSPORTATION PROGRAMS						
Employer Program	1991	1992	1993	1994	1996	1998
Offers Flexible Work Hours	35%	42%	41%	42%	49%	48%
Offers 4/40 Work Schedule	13	15	20	20	18	18
Offers 9/80 Work Schedule	9	11	12	11	10	10
Offers 3/36 Work Schedule	NA*	8	6	6	6	5
Assists In Forming Carpools And Vanpools	25	31	32	36	38	28
Provides Ridesharing Info	22	33	35	37	42	32
Guarantees A Ride Home In Case Of An Emergency	17	34	39	40	42	38
Provides Preferred Parking Spaces To Ridesharers	13	25	25	29	28	25
Registers Employees With Rideshare Agency	10	18	16	19	22	14
Provides Bus/Rail Information On Routes And Schedules	11	19	20	20	20	16
Provides Free/Low Cost Parking To Ridesharers	9	16	8	9	13	13
Subsidizes Ridesharing	9	15	19	20	15	10
Sells Bus/Rail Passes	7	10	9	10	10	8
Offers A Company Car During The Day To Those Who Rideshare	6	8	9	10	9	9
Has Contests/Prizes For Ridesharers	6	14	17	21	21	12
Gives Each Employee A Monthly Allotment Of Money To Reduce Commuting Costs	6	12	10	10	5	6

\*NA = Not asked in the 1990 or 1991 surveys

Despite the higher awareness of transportation programs at the larger employer sites with 100 or more employees, the usage of transportation alternatives is very similar between employees at these larger employer sites and their counterparts at smaller employer sites (27% of the employees at the larger sites are ridesharers vs. 26% at the smaller sites). By primary travel mode, the greatest differences occur

in carpooling: carpooling on a regular basis is highest at sites with 500 or more employees and lowest at sites with 250-499 employees (19% vs. 12%). Commuters at sites with more than 100 employees are only slightly less likely to drive alone to work on a regular basis than commuters at sites with fewer than 100 employees (75% vs. 78%).

TABLE 4.2

## AWARENESS BY EMPLOYEES OF EMPLOYER TRANSPORTATION PROGRAMS BY EMPLOYER SIZE

	Number of Employees at the Work Site								
	Less than 25			25-99			100+		
	1994	1996	1998	1994	1996	1998	1994	1996	1998
Offers Flexible Work Hours	43%	56%	50%	37%	41%	44%	45%	49%	47%
Offers 4/40 Work Schedule	18	20	15	20	17	13	22	22	23
Offers 9/80 Work Schedule	9	7	8	10	7	7	14	16	14
Offers 3/36 Work Schedule	7	6	5	6	4	2	6	8	7
Assists In Forming Carpools And Vanpools	13	14	10	25	26	16	70	71	55
Provides Ridesharing Info	12	16	11	28	30	20	74	77	63
Guarantees A Ride Home In Case Of An Emergency	35	37	36	35	37	32	50	52	44
Provides Preferred Parking Spaces To Ridesharers	12	9	10	17	17	12	57	56	51
Registers Employees With Rideshare Agency	4	3	4	9	15	7	47	51	32
Provides Bus/Rail Information On Routes And Schedules	7	6	5	11	12	8	44	43	32
Provides Free/Low Cost Parking To Ridesharers	4	6	7	7	9	8	18	22	23
Subsidizes Ridesharing	5	2	3	12	8	4	44	36	22
Sells Bus/Rail Passes	3	2	2	5	8	6	22	21	15
Offers A Company Car During The Day To Those Who Rideshare	9	6	7	6	7	7	15	12	13
Has Contests/Prizes For Ridesharers	5	4	3	13	13	5	49	47	27
Gives Each Employee A Monthly Allotment Of Money To Reduce Commuting Costs	5	3	4	3.7	2	4	20	9	10

Commuters who work at sites with 100 or more employees are slightly less likely to always rideshare (17% vs. 19%) or always drive alone (62% vs. 66%) than employees at sites with fewer than 100 employees (see Table 4.3).

A new question was introduced in 1991 regarding program participation. Respondents who claimed their employer offered various transportation programs at the work site were also asked whether they had used the program. Program participation rates range from 10 to 73 percent with a median program participation rate of 27 percent. Two-thirds of the

respondents who were aware of a transportation program actually participated in at least one program. The top three programs which generated the highest participation rates include: flexible work hours (73%), use of a company car to run personal errands (54%), and monthly allotment of money to reduce commuting costs (53%). The bottom three programs which triggered the lowest participation rates include: 3/36 work schedule (10%), 4/40 work schedules (11%), and bus/rail pass sales (18%). A breakdown of participation rates for all transportation programs can be found in Table 4.4.

Commuters at sites with fewer than 100 employees are as likely as commuters at sites with 100 or more employees to participate in transportation programs (67% vs. 68%). Programs which at least 200 respondents are aware of and generate the highest participation rates at sites with 100 or more employees in order of significance include: flexible work hours (67%), registration with a rideshare agency (37%), contests with prizes for ridesharers (33%), free or low cost parking for ridesharers (32%), ridesharing information (31%), and carpool and vanpool formation assistance (28%). Programs which at least 200 respondents are aware of and trigger the highest participation rates at sites with fewer than 100 employees in order of significance include: flexible work hours (78%), guaranteed ride home (26%), assistance in forming a carpool or vanpool (24%), and ridesharing information (22%). Employees at larger employer sites with 100 or more employees are much more likely to use financial incentives than their counterparts at smaller employer sites (45% vs. 22%). However, employees are just as likely to use non-financial incentives regardless of employer sizes (both 67%).

Beginning in 1992, a new question was asked regarding program influence on travel mode choice.

Of respondents who participated in a program, 7 to 40 percent believe the program influenced their choice of travel mode with a median influence rate of 15 percent. The most influential programs include: monthly allotment of money to reduce commuting costs (40%), company car during the day to those who rideshare (33%), guaranteed ride home (24%), carpool and vanpool formation assistance (17%), ridesharing information (16%), and bus and rail information on routes and schedules (16%).

### 4.3 TELECOMMUTING

Less than 10 percent (8.8%) of all respondents to the 1998 survey report that they have an opportunity to work at home instead of going to their regular place of work. It is slightly lower than the 9.2 percent reported in 1996 and is down significantly from the 12.5 percent reported in 1994. More than eight out of ten (83%) of those with the opportunity to telecommute actually do, and they telecommute an average of 3.4 days a month. Such high participation rates makes telecommuting the most popular program an employer can offer to employees—yet it is one of the least offered programs by employers.

TABLE 4.3

RIDESHARING PARTICIPATION AND FREQUENCY BY EMPLOYER SIZE												
	Number of Employees at the Work Site											
	Less than 25				25-99				100+			
	1996		1998		1996		1998		1996		1998	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Always drive alone	633	59%	707	67%	483	63%	499	65%	599	56%	633	62%
Drive alone + trip reduction option (telecommuting or compressed work week)	136	13	101	10	70	9	43	6	91	9	113	11%
Drive alone + mixed ridesharing*	104	10	60	6	57	8	72	9	147	14	111	11
Always rideshare*	195	18	185	18	155	20	154	20	229	21	171	17
Base:	1.068	100%	1.053	100%	765	100%	768	100%	1.066	100%	1.028	100%

\* Includes those on compressed work weeks or telecommuting.

Not everyone has the same opportunity to telecommute. For example, 12 percent of professional workers, 10 percent of middle managers, and 9 percent of senior managers say they have the opportunity to telecommute as opposed to 5 percent of production/crafts and 4 percent of secretarial/clerical workers. Employees within the finance industry have the greatest opportunity to telecommute (15%) while those in aerospace have the least opportunity (0% based on a small sample of 66 cases). For commuters with an annual household income of less than \$65,000, the opportunity to telecommute is about the same regardless of actual income (3.6-5.9%). However, for commuters with an annual household income of at least \$65,000, the more money one makes, the more likely he or she is to have the opportunity to telecommute. For those with household incomes of \$65,000 to \$79,999, the opportunity to telecommute is 9 percent, while for those with household incomes of \$100,000 or more

it jumps to 23 percent.

Ten percent of workers at sites with fewer than 25 employees have the opportunity to telecommute, whereas 6 percent of workers at sites with 25-99 employees and 9 percent of workers at sites with 100 or more employees have such an opportunity.

#### 4.4 ALTERNATIVE WORK SCHEDULES

Awareness of alternative work schedules at the work site remains consistent with findings from 1996. A breakdown of work schedules by year is illustrated in Table 4.6.

Six percent of survey respondents state that they are currently on either a 4/40, 9/80 or 3/36 work schedule. This is the same as reported in 1996 but represents a significant decline in alternative work schedule participation compared to the 13 percent

TABLE 4.4

PARTICIPATION IN EMPLOYER TRANSPORTATION PROGRAMS					
Employer Program	1992	1993	1994	1996	1998
Flexible Work Hours	75%	68%	68%	72%	73%
4/40 Work Schedule	48	53	42	15	11
9/80 Work Schedule	47	43	35	26	32
3/36 Work Schedule	38	34	43	11	10
Carpool And Vanpool Formation Assistance	41	27	26	29	27
Ridesharing Information	41	24	25	30	28
Preferential Parking Spaces To Ridesharers	40	29	29	34	26
Registration With a Rideshare Agency	37	22	27	49	33
Bus/Rail Information On Routes And Schedules	41	17	17	20	22
Free/Low Cost Parking To Ridesharers	44	32	38	34	32
Ridesharing Subsidies	41	33	35	34	27
Bus/Rail Pass Sales	29	19	7	20	18
Contests/Prizes For Ridesharers	32	35	32	36	29
Monthly Allotment Of Money To Reduce Commuting Costs	40	41	41	46	53

reported in 1994. Slightly less than 2 percent work a 4/40 schedule, 3 percent work a 9/80 work schedule and 1 percent work a 3/36 schedule. Employees at sites with 100 or more employees are more likely to be aware of alternative work schedules at their site than those at sites with fewer than 25 employees (31% vs. 20%).

#### 4.5 RECOGNITION OF 1-800-COMMUTE TELEPHONE INFORMATION

More than one-third (36%) of area commuters have heard of the 1-800-COMMUTE telephone information number. This represents a further decline from the 42 percent reported in 1996 after a significant decrease from the 61 percent reported in 1994. Men are somewhat less likely to be aware of the number than women (34% vs. 38% respectively). Recognition of the 1-800-COMMUTE number is higher among those at sites with 100 or more

employees than those at sites with fewer than 100 employees (42% vs. 32%). Workers in aerospace and wholesale trade are the most aware of the number (53% and 47%) while those in manufacturing/production and construction are the least aware (25% and 27%). Freeway users are more likely to be aware of the number than non-freeway users (38% vs. 33%).

Four percent of area commuters report that they have contacted the 1-800-COMMUTE number for commute-related information. Of those who contacted the number, more than half (55%) were interested in carpooling and vanpooling information, 33 percent were interested in bus/rail information, 16 percent called to receive Metrolink information, 6 percent were investigating freeway conditions, and 5 percent were interested in information on telecommuting. Users of the 1-800-COMMUTE number gave the service an average rating of 6.0, on a one to nine scale, where one is low and nine is high.

TABLE 4.5

INFLUENCE OF PROGRAM ON COMMUTE MODE CHOICE					
Employer Program	Influenced Commute Mode Choice				
	1992	1993	1994	1996	1998
Company Car During The Day To Those Who Rideshare	36%	15%	25%	9%	33%
Guaranteed Ride Home	28	28	27	17	24
Ridesharing Subsidy	18	21	23	19	13
Preferential Parking Spaces To Ridesharers	17	15	18	16	12
Monthly Allotment Of Money To Reduce Commuting Costs	16	21	29	18	40
Carpool And Vanpool Formation Assistance	15	17	17	18	17
Ridesharing Information	15	11	14	19	16
Free/Low Cost Parking To Ridesharers	14	17	24	18	14
Bus/Rail Information On Routes And Schedules	11	8	8	11	16
Registration With a Rideshare Agency	10	6	13	12	7
Contests/Prizes For Ridesharers	10	17	19	13	9
Bus/Rail Pass Sales	8	6	6	14	13



Additional findings on recognition of the 1-800-COMMUTE number by ethnicity and home county can be found in Tables 4.7-4.9.

#### 4.6 RIDEGUIDE

Six percent of area commuters report that they have received a RideGuide within the past 12 months, significantly lower than the 10 percent reported in 1996. (A RideGuide is a personalized commute planner highlighting all available travel options for a particular individual. RideGuides contain specific information on carpooling, vanpooling, bus, rail,

park and ride lots, and HOV facilities.) Of those who received a RideGuide, nearly three out of four (72%) were most interested in the information on carpooling, 9 percent were interested in vanpooling, 9 percent in transit (bus), 8 percent in rail, 2 percent in HOV lane information, and 0.5 percent in park and ride lot. Those who received a RideGuide gave it an average satisfaction rating of 6.2, on a one to nine scale, where one is low and nine is high.

Those at work sites of 100 or more employees are far more likely to receive a RideGuide than those at sites with fewer than 100 employees (12% vs. 2%). Gen-

TABLE 4.6

AWARENESS OF ALTERNATIVE WORK SCHEDULES AT WORK SITE												
	1991		1992		1993		1994		1996		1998	
Employer Offers:	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
4/40 Work Schedule	335	13%	375	15%	515	20%	522	20%	570	20%	510	18 %
9/80 Work Schedule	223	9	262	11	297	12	276	11	294	10%	297	10
3/36 Work Schedule	NA *		190	8	152	6	162	6	173	6%	150	5

NA\* - Not asked in the 1991 surveys

TABLE 4.7

RECOGNITION OF THE 1-800-COMMUTE NUMBER BY ETHNIC GROUP				
Recognition of:	White	African-American	Hispanic	Asian
1-800-COMMUTE	42%	50%	22%	46%

TABLE 4.8

FREEWAY USERS RECOGNITION OF THE 1-800-COMMUTE NUMBER						
Recognition of:	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial*
1-800-COMMUTE	42%	27%	33%	42%	38%	6%

\*Only six cases in Imperial County.

TABLE 4.9

NON-FREEWAY USERS' RECOGNITION OF THE 1-800-COMMUTE NUMBER						
Recognition of:	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial*
1-800-COMMUTE	36%	25%	33%	35%	32%	11%

\*Only nine cases in Imperial County.

erally speaking, the more employees at the work site, the more likely an individual has received a RideGuide. Nearly one in five (19%) workers at sites with 500 or more employees received a RideGuide within the past 12 months.

Women were slightly more likely than men to receive a RideGuide (7% vs. 5%). By ethnic group, Asians and White (non-Hispanic) (10% and 7% respectively) were more likely to receive a RideGuide than African-Americans and Hispanics (both 4%). Nearly one in five (19%) aerospace workers received a recent RideGuide as opposed to only 1 percent of workers in construction.

Where a commuter lives had only a marginal impact on the likelihood of whether they received a RideGuide. Those who live in San Bernardino County were slightly more likely (8%) to have received a RideGuide than those who live in either

Ventura (7%), Los Angeles (6%), Riverside (6%), or Orange County (5%).

Commuters who use a freeway to travel to work were about equally likely to have received a RideGuide than those who only travel on surface streets (6% vs. 5%). With regard to primary travel mode, 8 percent of carpoolers received a RideGuide within the past 12 months as opposed to 5 percent of drive-alone commuters.

# 5 Commuter Attitudes

## 5.1 INTRODUCTION

As in years past, respondents to the 1998 survey were asked a variety of attitudinal questions to learn about their perception of traffic conditions, commute satisfaction, experience with commute-related stress, factors influencing travel mode choice, attitudes toward and use of high occupancy vehicle (HOV) or carpool lanes, and awareness of regional rideshare advertising campaigns. Beginning in 1994, some new questions were added to learn about commuters' perceptions about the cost of their commute.

## 5.2 ATTITUDES TOWARD THE COMMUTE

Since 1991, respondents have been asked to rate traffic on the freeways and surface streets they use to travel to work and to compare current conditions to what traffic was like one year ago. Tables 5.1 and

5.2 compare 1998 ratings to ratings from previous years. All commuters were eligible to rate street traffic, but only the 1,613 commuters (55%) who indicated in a previous question that they use freeways were asked to evaluate freeway traffic.

As can be seen in Table 5.1, the trend since 1991 of fewer respondents believing freeway traffic is "always bad" changes in 1998: about 16 percent of commuters believe traffic is "always bad" compared to 13 percent in 1996. In addition, the down trend since 1993 in the percent of respondents who believe freeway traffic is "always good" continues in 1998. About 29 percent of respondents labeled their freeway traffic as "mixed," the highest percentage of all ratings. One could interpret from this that it is difficult for many commuters to label their commute as more often good or bad and that it really fluctuates between the two from day to day.

TABLE 5.1

PERCEPTIONS OF FREEWAY TRAFFIC AMONG FREEWAY USERS						
Traffic Rating	1991	1992	1993	1994	1996	1998
Always Bad	26%	19%	20%	18%	13%	16%
More Often Bad	24	30	14	16	19	19
Mixed	9	8	19	16	31	29
More Often Good	22	27	25	24	21	21
Always Good	19	16	22	26	16	15

TABLE 5.2

PERCEPTIONS OF SURFACE STREET TRAFFIC AMONG ALL COMMUTERS						
Traffic Rating	1991	1992	1993	1994	1996	1998
Always Bad	14%	11%	12%	11%	5%	6%
More Often Bad	19	21	12	15	14	11
Mixed	11	7	17	16	33	38
More Often Good	34	33	27	21	28	27
Always Good	22	28	32	37	20	18

The same trend witnessed in assessing freeway traffic conditions can be applied to surface street traffic as well. In 1998, commuters were slightly more apt to consider their surface street traffic as "always bad" and slightly less as "always good." The tremendous decrease in the percent of commuters rating surface street traffic as "always good" from 1994 to 1996 continues to 1998. As in past surveys, commuters continue to perceive street traffic as being considerably better than freeway traffic. This may be a reflection of less congestion on surface streets as well as shorter distances traveled on surface streets, whether for part or all of the commute to work. In addition, regional efforts to improve computerized signal synchronization may also have contributed to less congestion on many surface streets.

Respondents were also asked to compare current freeway traffic and surface street traffic to conditions of one year ago. Tables 5.3 and 5.5 show commuters' assessments from 1991 to 1998.

Fewer commuters (13% in 1998 vs. 18% in 1996) believe that traffic is better now than it was one year ago even after a dramatic decrease reported in 1996. There was a corresponding increase in the share of

commuters believing that traffic is worse now than one year ago (39% in 1998 vs. 34% in 1996). Nearly half of the respondents perceive freeway traffic to be about the same as a year ago.

It is not known to what extent employment rates in the region have affected traffic congestion during the peak hours, but it may be one factor contributing to commuters' changing attitudes about the commute. According to statistics from the California Employment Development Department and Southern California Association of Governments, the total number of workers living in the region in November 1990 was 6.9 million and declined steadily to 6.7 million in November 1993, a decline of 3 percent overall. Since then, however, the regional employment has grown steadily to 7.3 million by November 1997, an increase of nearly 9 percent. Perhaps even more importantly, this change in employment mostly occurred in Los Angeles County (See Table 5.4). (Note: Figures are reported for November prior to the study year to correspond to interview dates.)

A comparison of current surface street traffic to one year ago yielded similar results as the comparison of

TABLE 5.3

COMPARISON OF CURRENT FREEWAY TRAFFIC TO ONE YEAR AGO						
Traffic Rating	1991	1992	1993	1994	1996	1998
Better Than Year Ago	11%	12%	19%	31%	18%	13%
Same As Year Ago	25	33	32	30	48	48
Worse Than Year Ago	64	55	49	39	34	39

TABLE 5.4

REGIONAL EMPLOYMENT						
County of Residence	Nov. 1990 (000)	Nov. 1991 (000)	Nov. 1992 (000)	Nov. 1993 (000)	Nov. 1995 (000)	Nov. 1997 (000)
Los Angeles	4,157	4,166	4,037	3,927	4,009	4,238
Orange	1,260	1,225	1,228	1,251	1,270	1,356
Ventura	343	338	341	343	351	359
San Bernardino/Riverside	1,122	1,117	1,154	1,138	1,194	1,283
Imperial	37	39	41	41	41	41
<b>TOTAL:</b>	6,919	6,884	6,801	6,699	6,866	7,278

\*Source: California Employment Development Department/SCAG Employment Database. Based on a household survey.

freeway traffic. Commuters' perception of current surface street traffic compared to one year ago remain essentially the same as reported in 1996 after a tremendous decrease in the share of commuters believing surface street traffic was better now than a year ago, and a similar decrease in the share of commuters believing surface street traffic was worse as reported in 1996. Nearly six in ten commuters (59%) believe surface street traffic is the same as a year ago.

An additional question was asked beginning in 1991 regarding commute travel time compared to one year ago. From 1991 through 1994, the share of commuters reporting that their commute is longer now than a year ago declined each year from 1991 through 1994 but has remained about the same since then (see the numbers below):

- 1991 - 47%
- 1992 - 40%
- 1993 - 36%
- 1994 - 28%
- 1996 - 29%
- 1998 - 29%

### 5.3 OVERALL SATISFACTION WITH THE COMMUTE

Each year, since 1990, survey respondents have been asked to rate their overall satisfaction with their commute, using a scale of one to nine, where one represents the least dissatisfaction, and nine represents the most satisfaction. The average satisfaction rating reported by all commuters has improved steadily since 1990 as follows:

- 1990 - 5.8
- 1991 - 5.8
- 1992 - 6.0
- 1993 - 6.4
- 1994 - 6.6
- 1996 - 6.6
- 1998 - 6.7

Findings in 1998 are consistent with those reported in 1996. More than forty percent of all commuters (42%) rate their satisfaction level as either an eight or nine; only 4 percent give it the lowest ratings of either one or two.

By primary travel mode, those who take rail, bicycle, or walk are the most satisfied with their commute. Those who ride motorcycle or drive alone are the least satisfied (see Table 5.6).

TABLE 5.5

COMPARISON OF CURRENT SURFACE STREET TRAFFIC TO ONE YEAR AGO						
Traffic Rating	1991	1992	1993	1994	1996	1998
Better Than Year Ago	13%	13%	18%	17%	10%	11%
Same As Year Ago	35	41	40	48	62	59
Worse Than Year Ago	52	46	42	35	28	30

TABLE 5.6

COMMUTE SATISFACTION BY TRAVEL MODE		
Primary Travel Mode	1 = Low Satisfaction	9 = High Satisfaction
	Average Satisfaction Rating	Number of Cases
Rail	8.0	17
Bicycle	7.7	14
Walk or Jog	7.6	47
Vanpool	7.1	34
Bus	6.9	103
Carpool	6.8	419
Drive Alone	6.7	2,253
Motorcycle	5.4	28



Full-time ridesharers are slightly more satisfied (satisfaction level of 6.9) with their commutes than are full-time drive-alone commuters or part-time ridesharers (both 6.6).

As Table 5.7 illustrates, there is a significant difference in satisfaction levels when trip distance is considered: in general, the shorter the com-

mute distance, the more satisfied people are with their commute. Maybe due to the shorter commutes, women are slightly more satisfied with their commute than men (6.8 vs. 6.6).

## 5.4 COMMUTER STRESS

Peak-hour traffic is often cited as having a negative impact on the quality of life in Southern California.

In order to monitor the extent to which commuting adds stress to the lives of workers in the six-county region, a series of questions were added to the survey beginning in 1993. Results from these questions are very similar to those reported in 1996.

When asked how often they feel bothered by traffic congestion in commuting to or from work, 21 percent of commuters report that they are never bothered, an increase of three percentage points over 1996 results (see Table 5.8); 28 percent report that they are fairly often or very often affected, down three percentage points from 1996.

By travel mode, those who take a bus or ride a bicycle to work are the least bothered by traffic congestion, while vanpoolers are the most bothered (there was no significant difference between carpoolers and drive-alone commuters). Being bothered by traffic is positively correlated with commute distance, as, to a lesser degree, with income. Women are just as likely as men to report being bothered by traffic. By ethnicity, Asians are the most bothered by traffic, Hispanics are the least bothered.

TABLE 5.7

COMMUTE SATISFACTION BY TRIP DISTANCE		
	1 = Low Satisfaction	9 High Satisfaction
Distance	Average Satisfaction Rating	Number of Cases
Less than 5 miles	7.6	572
5 to 9 miles	7.2	580
10 to 14 miles	6.8	495
15 to 19 miles	6.3	294
20 to 24 miles	6.4	288
25 to 29 miles	6.6	169
30 to 34 miles	5.6	115
35 to 44 miles	5.6	223
45 miles and over	5.5	160

TABLE 5.8

FREQUENCY OF FEELING BOTHERED BY TRAFFIC DURING COMMUTE				
	1993	1994	1996	1998
Very Often	20%	18%	19%	17%
Fairly Often	11	10	12	11
Sometimes	30	28	28	27
Hardly Ever	22	22	23	24
Never	17	22	18	21

Nearly half of all commuters (48%) claim that they never need to wind down and relax before starting work after their journey to work, which is slightly lower than the 50 percent reported in 1996 (see Table 5.9). Commuters with travel distances of 15 miles or more one-way are much more likely than commuters with shorter travel distances to report having a need to wind down after their trip (20% vs. 11%).

As was the case last year, fewer than one in ten commuters report that dealing with traffic on their commute home from work often has a negative effect on their home life (see Table 5.10). In fact, only for commuters with longer travel distances (30 miles or more) does the incidence of negative impact on home life increase significantly. Nearly one in five commuters who travel 45 miles or more one-way (18%) report that their commute home from work often has a negative effect on their home life.

## 5.5 COMMUTER CONCERNS

Respondents were asked which factors they consider when choosing their means of transportation to work. The seven most frequently mentioned factors are:

- ◆ convenience/flexibility (22%)
- ◆ travel time (16%)

- ◆ reliability/dependability(16%)
- ◆ having no other way to get to work (12%)
- ◆ having a vehicle at work (9%)
- ◆ work hours/schedule (8%)
- ◆ having a vehicle before/after work (8%)

To better understand what is meant by “convenience/flexibility,” a new question was added in 1993 asking respondents to provide their own definition of the term. The top four responses based on the share of commuters first citing convenience or flexibility as a factor in choosing their travel modes are as follows:

- ◆ the ability to come and go as I please (43%)
- ◆ don't have to plan/coordinate with others (19%)
- ◆ fastest way to travel (13%)
- ◆ allows me to change plans, add stops, as I please (11%)

Commuting costs continue to lack major importance as a motivating factor, even though ridesharers most frequently cite “save money/save gas” as motivation for choosing an alternative to driving alone to work. Nevertheless, for the vast majority of all commuters - those who drive alone to work - cost is an insignificant factor because the cost of commuting

TABLE 5.9

FREQUENCY OF NEED TO WIND DOWN AFTER TRIP TO WORK				
	1993	1994	1996	1998
Very Often	10%	11%	8%	11%
Fairly Often	5	5	5	4
Sometimes	15	15	16	15
Hardly Ever	24	19	21	22
Never	46	50	50	48

TABLE 5.10

DEGREE COMMUTE HOME HAS NEGATIVE EFFECT ON HOME LIFE				
	1993	1994	1996	1998
Very Much	4%	3%	3%	3%
Quite A Bit	5	6	6	5
Somewhat	12	11	9	10
A Little	20	19	22	25
Not At All	59	61	60	57

(including parking provided to employees free by more than nine in ten employers) in Southern California continues to be extremely low. Only 2 percent of all commuters cited improvement of air quality as a motivating factor in choosing their travel mode. An additional 3 percent reported saving energy/fuel as a motivating factor.

A comparison of mode choice factors by primary commute mode is helpful for understanding the leading motivations for ridesharing. (Note: the sample bases for vanpool, rail, bicycle and walk are too small to be included; the sample base for bus riders is too small to form quantifiable conclusions but is shown here only to provide the relative weights of the specific factors). See Table 5.11. Not surprisingly, drive-alone commuters are far more likely than carpoolers or bus riders to consider the need to have a vehicle available before, during, or after work hours, variability of work hours, and reliability. Carpoolers are far more likely than drive-alone commuters to consider travel time and commuting costs while bus riders are most likely to consider "having no other way to get to work" as a mode choice factor. In fact, for carpoolers, commuting costs are the most frequently cited factors considered when choosing their travel mode.

When trip distance is considered, factors such as travel time to work (25% vs. 18%), reliability/dependability (29% vs. 15%), commuting

costs (19% vs. 4%), and having no other way to get to work (16% vs. 9%) are far more likely to be considered by commuters who travel 45 or more miles one-way than by commuters who travel fewer than five miles.

## 5.6 CONSIDERATION OF ALTERNATIVE TRAVEL MODES

To learn about the potential for converting solo driving behavior to alternative commute modes and to identify the characteristics of commuters who are most likely to change, in every annual survey since 1989, drive alone respondents were asked if they would consider an alternative mode of transportation one or two days a week, just to see if they like it. Alternatives were mentioned to respondents one at a time. If a respondent said "yes" to any of the alternatives, the interviewer probed to find out whether the alternative was something they would definitely try or something they might try.

In order to maximize realistic options to commuters, only those traveling fewer than three miles were asked about walking; those traveling fewer than seven miles were asked about bicycling; and those traveling more than 20 miles were asked about vanpooling. Carpooling, bus and rail interest were asked of all commuters, regardless of the distance traveled.

TABLE 5.11

FACTORS * CONSIDERED WHEN CHOOSING MODE BY PRIMARY COMMUTE MODE			
	Drive Alone	Carpool	Bus**
Convenience / Flexibility	23%	22%	9%
Travel Time	13	25	5
Having Vehicle During Work	11	3	0
Reliability	18	13	3
Work Hours	10	4	0
No Access to Alternatives	10	15	53
Commuting Costs * * *	6	31	8
Privacy	5	2	1
Safety	4	4	5
Having Vehicle Before/After Work	10	4	0
Base:	2,262	419	103

\*Question posed on open-ended basis. Up to three responses were recorded, so percentages total more than 100 percent. Only factors mentioned by more than 5 percent are shown in Table.

\*\*Base is too small for statistical confidence.

\*\*\*Includes "save gas".



TABLE 5.12

## LIKELIHOOD OF TRYING AN ALTERNATIVE MODE ONCE OR TWICE A WEEK

Travel Mode	Definitely Would Try						Might Try						Would Not Try					
	'91	'92	'93	'94	'96	'98	'91	'92	'93	'94	'96	'98	'91	'92	'93	'94	'96	'98
Carpooling	16%	20%	18%	16%	19%	15%	31%	13%	24%	24%	22%	26%	53%	67%	58%	60%	59%	59%
Vanpooling (a)	13	16	18	23	20	13	28	11	16	14	17	20	59	73	64	63	63	67
Commuter Rail	11	6	17	14	11	7	18	9	12	8	10	8	71	85	71	78	79	85
Taking the Bus	7	7	8	6	2	5	18	6	10	7	1	11	75	87	82	87	97	84
Bicycling (b)	13	11	15	16	11	12	15	8	10	13	13	12	72	81	75	71	76	76
Walking or Jogging (c)	18	8	12	19	16	13	21	11	11	11	13	15	61	82	77	70	71	72

\*NA = Not asked in the 1990 survey

(a) Among drive alone respondents with 21(+) miles one way

(b) Among drive alone respondents with 7 or fewer miles one way

(c) Among drive alone respondents with 3 or fewer miles one way

Overall, there is more interest in carpooling and vanpooling than in any of the other alternative travel modes. Interest in carpooling (including both a strong interest and a moderate interest), vanpooling, bicycling, and walking were comparable to results from 1996. Interest in taking the bus recovered from a significant drop in 1996 while interest in taking rail fell from findings in the previous study.

In order to identify ways to convert drive-alone commuters to rideshare modes, an analysis was conducted to learn about the characteristics of commuters who said they were open to try carpooling (only base large enough for analysis).

Taking a closer look at the drive-alone commuters who say they definitely would try carpooling revealed the following. Those who travel longer distances to work are more likely to consider carpooling (average 17 miles one-way vs. 15 miles for all other commuters); women are more open to carpooling than men (17% vs. 13%); Hispanics are more open to carpooling than other ethnic groups (20% vs. 11-17%); and production workers are more open to carpooling than workers in other occupations (27% vs. 8-17%); commuters at work sites with 100+ employees are more likely to consider carpooling than those at smaller sites (17% vs. 14%).

Nearly half of drive-alone commuters (49%) are now willing to try an alternative travel mode, slightly lower than the 53 percent reported in 1996.

To gain a better understanding of the obstacles to ridesharing, commuters who exclusively drive alone were asked on a close-ended basis what may have prevented them from ridesharing.

The three leading reasons given by drive-alone commuters for not wanting to try carpooling include:

- ◆ Work schedule too irregular (30%);
- ◆ Need my vehicle at work (26%);
- ◆ Distance too short (14%).

The three leading reasons given by commuters for not wanting to try vanpooling include:

- ◆ Need my vehicle at work (38%);
- ◆ Work schedule too irregular (25%);
- ◆ Need my vehicle before/after work (13%).

The three leading reasons given by commuters for not wanting to try the bus include:

- ◆ No bus available (21%);
- ◆ Need my vehicle at work (21%);
- ◆ Work schedule too irregular (13%).

The three leading reasons given by commuters for not wanting to try rail include:

- ◆ No train available (33%);

- ◆ Need my vehicle at work (20%);
- ◆ Work schedule too irregular (11%).

## 5.7 ATTITUDES TOWARD AND USE OF HIGH OCCUPANCY VEHICLE (HOV) LANES

Respondents who travel on a freeway were asked “Is there a special commuter lane that can be used only by carpools, vanpools, or buses on the freeway that you travel to and from work on?” So as to reduce confusion, interviewers specified that “this does not include metered on-ramps.” Of the 1,613 respondents who travel on a freeway as part of their commute (55% of all respondents), 53 percent claim to have HOV lanes available to them, higher than the 48 percent reported in 1996, 43 percent reported in 1994 and 37 percent reported in 1993. Of all individuals who have access to HOV lanes, 21 percent actually used them at least once in the previous week. Of those who rideshare, 75 percent report that they traveled on a HOV lane at least once during the previous week. The average one-way commute distance of HOV lane users is 30.9 miles. This trip takes them, on average, 36 minutes to get to work and 47 minutes to return home.

Of those individuals who use an HOV lane, 88 percent believe the lane saves them time. When asked how much time is saved, respondents report an average time savings of 20 minutes (one-way). This represents a time savings of 34 percent of their commuting time (based on 77 cases).



Individuals who have access to an HOV lane and carpool, vanpool or take the bus at least one day a week but don't use the HOV lane (only 55 cases) were asked why. More than one-quarter of these commuters report that their travel distance on the freeway is too short (28%) to use the HOV lane. Nineteen percent said that they do not have enough people in the vehicle to qualify and 10 percent believe the lanes save them too little time. The remaining responses varied among several categories.

Respondents who travel on a freeway as part of their commute to work and currently have no access to HOV lanes were asked whether they would be encouraged to rideshare if they had an HOV lane available to them. Of these commuters, more than half (51%) said they personally would be encouraged to rideshare.

## 5.8 FAMILIARITY WITH REGIONAL PUBLIC AWARENESS CAMPAIGNS

A new set of questions regarding advertising for ridesharing was introduced in 1993. These questions were added to provide an understanding of commuters' familiarity with regional advertising. Nearly half (49%) recall hearing, seeing or reading an advertisement for ridesharing within the last 12 months, down from 62 percent in 1996, 69 percent in 1994, and 63 percent reported in 1993.

The work place is the most frequently cited source of rideshare advertising (27%), followed by radio (23%), billboards (20%), newspapers (15%), television (12%), and the blue freeway signs (10%).

Commuters who recall a ridesharing advertisement were asked about the message conveyed. Nearly one in five (18%) could not recall any message. The message with the most recall (22%) was “that you should rideshare.” Other messages recalled include, “call 1-800-COMMUTE” (14%), “Team Rideshare” (7%), “it would help the environment” (7%), “you can call for carpool or vanpool information” (5%), and “it saves time” (5%).

Nine percent of commuters said they did try ridesharing after hearing or seeing rideshare advertising, similar to the 8 percent reported in 1996.

## 5.9 COSTS OF COMMUTING

The cost of commuting is an important factor cited for changing to a rideshare mode and is the most frequently cited factor by carpoolers when choosing their travel mode. Therefore, in order to know about potential price sensitivities of alternatives to driving alone and the extent to which greater awareness of the costs of commuting might actually help to increase rideshare rates, it was important to know the extent to which commuters actually estimate their commuting costs.

Thirty-five percent of respondents claimed to have previously calculated their commuting costs. Long-distance (35+ miles one-way) commuters are more likely than short distance (less than 5 miles) commuters to have calculated the costs of commuting before being prompted by the interview (52% vs. 20%). For all commuters - including those who had and had not previously estimated costs - the perceived monthly cost of commuting on average is \$99, up again from \$93 in 1996 after an increase from \$86 in 1994. (The median is \$65 and the mode is \$100. Note: the distribution of estimates has a long tail because some commuters are evidently including not just operating costs but also ownership costs such as insurance and depreciation).

As expected, estimated costs of commuting are positively correlated with commute distance. Below are the average estimated monthly costs of commuting by distance segment as reported by the respondents.

<b>One-Way Commute Distance</b>	<b>Estimated Monthly Commute Costs</b>	<b>Number of Cases</b>
Under 5 miles	\$ 59	515
5 to 9 miles	71	568
10 to 14 miles	85	482
15 to 19 miles	102	277
20 to 24 miles	114	283
25 to 29 miles	128	166
30 to 34 miles	142	105
35 to 39 miles	140	115
40 to 44 miles	180	103
45 or more miles	201	157

Also, the average estimated monthly costs of commuting by primary travel mode as reported by the respondents are as follows:

<b>Primary Travel Mode</b>	<b>Estimated Monthly Commute Costs</b>	<b>Number of Cases</b>
Train/Rail	\$109	17
Drive Alone	104	2,199
Vanpool	103	33
Carpool	94	400
Public Bus	42	103
Walk or Jog	39	3
Motorcycle	33	25
Bicycle	10	6

# 6 County Comparisons\*

## 6.1 INTRODUCTION

Each year since 1991, more than 500 interviews were completed (525 since 1994) with commuters residing in each of the five counties, including Los Angeles, Orange, Riverside, San Bernardino and Ventura. Beginning with the 1996 State of the Commute, 300 interviews were also completed in Imperial County. A sample size of 525 provides an acceptably accurate estimate (sampling error is  $\pm 4.5\%$  at 95% confidence level) to allow for county comparisons. The regional profile detailed in the first five chapters of this report blurs the significant county differences and changes over time in level of traffic congestion, travel time, trip distance, alternative travel mode usage, awareness and participation in employer transportation programs, and parking issues. This chapter highlights the key county differences and trends.

All statistics by county reported in the tables in Chapter 6 refer to the respondent's home county, with the exception of statistics in tables detailing employer-related programs, which refer to the respondent's work county.

Number of Surveys Completed by County:	
Los Angeles	525
Orange	525
Riverside	525
San Bernardino	525
Ventura	525
Imperial	300
Total	2,925

## 6.2 TRAVEL MODE

Primary travel mode used (3+ days per week) by home county for each survey year since 1991 is provided in Table 6.1.

The drive alone rate is the lowest in Los Angeles County (75%), followed by Imperial, San Bernardino, and Ventura Counties (all 79%), Riverside County (80%), and is the highest in Orange County (81%). Overall, the results are consistent with 1996 findings. The change in the drive alone rate in Riverside and Imperial Counties falls within the margin of error and is not statistically significant. The drive alone rate in Orange County increases slightly in 1998 after a four-year downward trend from 86 percent in 1993 to 79 percent in 1996.

Usage of alternative travel mode is fairly consistent across county lines. However, the carpooling rate is lower in Orange County (11%) than in the other five counties (from 14% in Los Angeles to 17% in San Bernardino County) while the bus rate is higher in Los Angeles (4.6%) and Orange (2.9%) Counties than in the other three counties (0.4-1.3%). With the exception of Ventura and Imperial Counties, commuter rail continues to appear at the county level within the study's findings.



\*Note: As in years past, findings in chapters one through five have been weighted to reflect the commuting population residing in each county and by the number of full-time workers in the respondent's household. In Chapter 6, which covers county-specific results, only weighting to reflect the number of full-time workers in the household has been used.

TABLE 6.1

## PRIMARY TRAVEL MODE BY HOME COUNTY

	Los Angeles				Orange				Riverside				San Bernardino				Ventura				Imperial	
	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'96	'98
Drive Alone (#)	391	418	389	396	443	433	417	426	442	419	406	421	413	432	414	416	425	428	403	415	254	239
(%)	76	80	74	75	86	83	79	81	85	80	77	80	80	82	79	79	82	82	77	79	85	79
Carpool (#)	82	73	79	76	56	74	86	60	59	84	84	84	87	68	85	90	60	78	86	83	37	49
(%)	16	14	15	14	11	14	16	11	11	16	16	16	17	13	16	17	12	15	16	16	12	16
Vanpool (#)	7	7	5	6	1	2	2	6	7	10	10	4	4	2	2	4	11	4	13	11	1	3
(%)	1	1	1	1	.2	0	0	1	1.5	2	2	1	1	0	0	1	2	1	3	2	0	1
Bicycle (#)	2	4	2	2	2	1	3	5	2	1	5	1	3	2	3	4	8	4	10	6	1	1
(%)	5	1	0	0	3	0	1	1	.5	1	1	0	.5	0	1	1	1.5	1	2	1	0	0
Motorcycle (#)	3	1	1	8	2	3	1	0	2	5	1	1	1	1	1	2	3	0	2	2	0	0
(%)	.5	0	0	2	.5	1	0	0	.5	1	0	0	0	0	0	0	.5	0	0	0	0	0
Public Bus (#)	20	14	35	24	5	9	9	15	2	4	11	7	2	6	9	2	6	3	7	5	1	3
(%)	4	3	7	5	1	2	2	3	.5	1	2	1	.5	1	2	0	1	0	1	1	0	1
Commuter Rail (#)	1	1	4	3	0	0	3	4	0	0	7	1	1	5	8	2	0	3	0	0	0	0
(%)	.2	0	1	1	0	0	1	1	0	0	1	0	.2	1	2	0	0	0	0	0	0	0
Private Bus (#)	4	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	2	0	0	0
(%)	.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk or Jog (#)	7	8	11	10	8	4	5	9	4	6	2	5	7	9	4	6	5	5	2	4	5	6
(%)	1	1	2	2	1	1	1	2	1	1	0	1	1	2	1	1	21	1	1	1	2	2
Base	498	517	525	525	498	517	525	525	502	518	525	525	497	518	525	525	498	520	525	525	300	300

### 6.3 TRIP DISTANCE

The average one-way distance to work reported by commuters by county for the last five years can be found in Table 6.2.

With the exception of Los Angeles and Imperial County commuters, commute distances declined from 1996 to 1998 for commuters in all other counties. Commute distances are longest for San Bernardino County commuters and shortest for Imperial County commuters.

### 6.4 TRAVEL TIME TO AND FROM WORK

The average travel time to and from work for commuters by county over the last five survey years is shown in Tables 6.3 and 6.4.

Imperial County commuters report taking the least amount of time to get to and from work (47 minutes), while San Bernardino and Riverside County commuters report taking the most time (both 76 minutes). Commute times for the trip to and from work have remained fairly consistent over time with-

in each county. For all counties, the trip home takes longer than the trip to work.

With regard to perceptions of commute times compared to a year ago, Imperial County commuters (22%) were less likely to believe that their commute is longer now than it was one year ago than commuters in any other counties (26-30%). The percentages of commuters who feel their commute now takes longer than it did one year ago by county are:

Los Angeles	29%
Orange	30
Riverside	26
San Bernardino	30
Ventura	26
Imperial	22

These figures are consistent with 1996 findings with the exception of responses from Imperial County. In 1996, 18 percent of Imperial County commuters felt their commute was longer now than it was a year ago.

TABLE 6.2

COMMUTE DISTANCE IN MILES BY HOME COUNTY						
	1991	1992	1993	1994	1996	1998
Los Angeles	15.6	15.8	13.3	15.3	14.6	15.3
Orange	15.2	14.9	14.0	15.8	15.7	14.2
Riverside	21.4	20.9	22.8	22.2	24.1	21.0
San Bernardino	21.2	20.4	20.0	21.3	25.0	22.4
Ventura	17.1	17.7	15.4	16.2	17.8	15.9
Imperial*	NA	NA	NA	NA	11.8	12.1

\* Imperial County was included for the first time in the 1996 study.

TABLE 6.3

COMMUTING TIME FOR TRIP TO WORK BY HOME COUNTY						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	33 minutes	37 minutes	33 minutes	30 minutes	33 minutes	31 minutes
Orange	33	32	29	30	30	31
Riverside	37	38	37	36	38	36
San Bernardino	35	35	36	36	38	37
Ventura	30	28	26	28	28	26
Imperial*	NA	NA	NA	NA	20	23

\* Imperial County was included for the first time in the 1996 study.

TABLE 6.4

COMMUTING TIME FOR TRIP TO HOME BY HOME COUNTY						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	38 minutes	42 minutes	36 minutes	34 minutes	36 minutes	38 minutes
Orange	37	35	34	38	37	34
Riverside	38	41	43	43	46	40
San Bernardino	40	42	39	42	47	39
Ventura	35	32	30	31	32	30
Imperial*	NA	NA	NA	NA	21	24

\* Imperial County was included for the first time in the 1996 study.

## 6.5 FREEWAY USAGE

The following table reports the historical share of commuters by home county who use a freeway as part of their commute. Except in Imperial County, freeway usage rates this past year declined in all counties especially in Orange and Riverside counties. Freeway usage is highest for commuters in Ventura County and lowest in Imperial County.



## 6.6 BUS AVAILABILITY

Respondents to the survey were asked whether they thought there was a bus they could take to get to

work. Affirmative responses are similar to 1996 results after a substantial increase from 1994 findings. Over the last six survey periods, there has been a significant increase in awareness of bus availability by commuters across counties.

## 6.7 SIDE TRIPS TAKEN BEFORE AND/OR AFTER WORK

Respondents were asked whether they make stops on the way to or from work. Incidence of trips taken on the way to work by county is consistent among the counties ranging from 21 percent to 26 percent. The percent of commuters reporting that they make a stop on the way to work declined slightly from

1996 findings for commuters in all counties except Riverside.

The percent of commuters who make stops on their way home from work by county is significantly

TABLE 6.5

FREEWAY USAGE BY HOME COUNTY						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	49%	53%	56%	54%	59%	54%
Orange	52	51	53	57	63	55
Riverside	50	56	62	59	63	56
San Bernardino	56	51	61	54	61	57
Ventura	60	63	62	64	63	61
Imperial*	NA	NA	NA	NA	37	38

\* Imperial County was included for the first time in the 1996 study.

lower than findings from 1996 across counties with two minor exceptions in Los Angeles and Riverside Counties.

Orange County residents (23%) are much less likely to report making stops on the way home from work than any other counties (27-30%).

## 6.8 PARKING

Respondents were asked if they paid for parking at their work site. As shown in Table 6.9, more than nine in ten commuters in every county receive free parking, which has not changed over the last eight years. Commuters who work in Los Angeles County are more likely to contribute to the cost of parking than are commuters working in the other counties. There were too few respondents who paid for parking in each county to accurately assess the average monthly parking amount paid.

## 6.9 PARK AND RIDE LOT USAGE

Commuters who live in Imperial County are most apt to use park and ride lots in their commutes - 5.4 percent used a park and ride lot the week prior

to the survey interview, followed by Los Angeles (5.0%), Ventura (3.8%), San Bernardino (2.9%), Orange (2.7%), and Riverside (2.1%). These figures are overall consistent with 1996 findings.

## 6.10 ALTERNATE ROUTE USAGE

Respondents were asked if they ever change their usual route and take an alternate route when traffic is jammed. Commuters in Los Angeles County were the most likely (69%) while commuters in Imperial County were the least likely to use (40%) to take an alternate route. Findings for each county are consistent with previous survey results.

If radio traffic reports included alternate route information, commuters living in San Bernardino County were most likely to use an alternate route (44%) while commuters living in Imperial County were least likely (38%).

## 6.11 HIGH OCCUPANCY VEHICLE LANES

Ridesharers who travel on a freeway during their commute were asked whether their freeway had a

TABLE 6.6

AWARENESS OF BUS AVAILABILITY BY COUNTY						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	42%	41%	51%	44%	59%	54%
Orange	33	38	39	29	52	51
Riverside	21	24	25	20	34	30
San Bernardino	20	18	26	26	37	34
Ventura	23	19	24	22	31	30
Imperial *	NA	NA	NA	NA	35	29

\* Imperial County was included for the first time in the 1996 study.

TABLE 6.7

STOPS MADE ON WAY TO WORK BY COUNTY						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	21%	19%	20%	21%	25%	23%
Orange	16	16	18	20	25	21
Riverside	28	22	19	28	26	26
San Bernardino	28	19	23	25	27	26
Ventura	22	17	24	24	26	25
Imperial *	NA	NA	NA	NA	29	23

\* Imperial County was included for the first time in the 1996 study.



TABLE 6.8

STOPS MADE ON WAY HOME						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	30%	22%	32%	34%	32%	30%
Orange	26	27	22	34	34	23
Riverside	35	26	27	35	31	29
San Bernardino	29	28	32	31	32	28
Ventura	26	27	31	36	33	27
Imperial	NA	NA	NA	NA	34	29

\* Imperial County was included for the first time in the 1996 study.

TABLE 6.9

EMPLOYEE SHARE OF PARKING COST BY COUNTY						
Work County						
Employee Share	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
All	6%	3%	1%	1%	1%	1%
Some	2	1	1	1	2	1
None	92	96	98	98	97	98

special commuter lane (HOV lane) reserved for car-pools, vanpools, or buses. Affirmative responses to this question are broken down by home county as follows:

County	HOV Availability
Los Angeles	54%
Orange	72
Riverside	41
San Bernardino	32
Ventura	25
Imperial	10

By far, those who live in Orange County continue to have the greatest access to HOV lanes.

Respondents who currently do not have access to an HOV lane were asked whether the availability of these lanes would personally encourage them to car-pool, vanpool, or take the bus. Los Angeles County commuters were the most positive: 56 percent said HOV lanes would provide them an encouragement to rideshare; this was followed by 49 percent in Imperial County, 47 percent in Orange County, 46 percent in San Bernardino County, and 41 percent in both Ventura and Riverside Counties.

## 6.12 WORK COUNTY LOCATION

The following tables illustrate work county locations by home county. The matrix in Table 6.10 reports the findings of the 1998 State of the Commute; the matrix in 6.11 shows the estimated results for 1994 based on SCAG's Regional Transportation Model. Differences may be the result of a combination of slightly different populations (see footnote), actual changes that have taken place in the region since 1994, and sampling error incurred in each survey and through the comparison of two samples.

## 6.13 EMPLOYER-PROVIDED TRANSPORTATION INFORMATION AND SERVICES

Respondents were first asked whether they were aware of their employer offering specific information or services to encourage employees to carpool, vanpool, take the bus, walk or bicycle to work. Levels of awareness of these programs by work county are illustrated in Table 6.12.

The majority of all commuters in each county are aware of at least one type of employer-provided transportation information or service offered at the

work site. The percentage of commuters in each county aware of at least one type of program is consistent across county lines: 79 percent in Los Angeles, Orange, and Ventura Counties, 76 percent in San Bernardino County, 74 percent in Riverside County, and 71 percent in Imperial County.

However, with the exception of Imperial County, program awareness declined for most programs across all other county lines from 1996 to 1998.

Less than one out of seven workers in each county (ranging from 3% in Imperial County to 13% in both Orange and Los Angeles Counties) report an awareness of financial incentives to rideshare, i.e., “subsidizes ridesharing” or “gives employees a monthly allotment of money,” offered by their employers. However, more than seven out of ten workers in each county (ranging from 71% in Impe-

rial County to 79% in Los Angeles County) report an awareness of non-financial incentives to rideshare such as “guaranties a ride home in case of emergency” and “provides ridesharing information.” Across all counties, commuters were most aware of flexible work hours, guaranteed ride home, and provision of ridesharing information.

When programs were offered by their employer, respondents were asked which, if any, they personally use. With the exception of Orange and Imperial Counties, program participation declined for most programs across all other county lines from 1996 to 1998, particularly in Los Angeles County (participation drops in eleven of the thirteen programs). The participation in compressed work week schedules stabilized to some extent across counties in 1998 after plummeting in 1996.

TABLE 6.10

HOME COUNTY BY WORK COUNTY						
Home County						
Work County	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Los Angeles	90%	15%	7%	16%	19%	0%
Orange	5	83	9	4	1	0
Riverside	0	1	73	10	0	0
San Bernardino	2	1	6	69	1	1
Ventura	1	0	0	0	80	1
San Diego	0	0	4	1	0	1
Imperial	1	0	1	0	0	97

TABLE 6.11

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS 1994 REGIONAL MOBILITY ELEMENT MODEL*					
Home County					
Work County	Los Angeles	Orange	Riverside	San Bernardino	Ventura
Los Angeles	93%	16%	11%	16%	20%
Orange	5	83	8	5	0
Riverside	0	1	62	10	0
San Bernardino	1	1	20	69	0
Ventura	0	0	0	0	79

Note: Percentages add to less than 100% in some cases due to rounding.

\*Based on home to work person trips, including part-time and under age 18 workers.

## AWARENESS OF EMPLOYER TRANSPORTATION PROGRAMS

50

TABLE 6.12 (cont'd)

## AWARENESS OF EMPLOYER TRANSPORTATION PROGRAMS

	Work County											
	Los Angeles				Orange				Riverside			
	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98
Subsidizes Ridesharing	20%	22%	14%	10%	18%	22%	21%	11%	8%	16%	16%	7%
Sells Bus/Rail Passes	10	13	12	9	7	7	8	7	5	6	8	5
Offers a Company Car During the Day to Ridesharers	10	10	9	9	8	10	5	8	8	10	10	6
Has Contests/Prizes for Ridesharers	20	25	21	11	17	23	23	13	10	19	19	9
Gives each Employee a Monthly Allotment of Money to Reduce Commuting Costs	12	13	5	7	8	8	5	5	5	5	5	3
	14%	15%	15%	9%	14%	15%	15%	9%	14%	15%	11%	8%
	2%	2	1		14%	15%	11%	8%	2%	2	1	
	10	12			10	8	11	12	10	12		
	1	1			17	18	20	11	1	1		
	2	1			7	9	4	4	2	1		

NA = Not Applicable in Orange County



## PARTICIPATION IN EMPLOYER TRANSPORTATION PROGRAMS

	Work County																					
	Los Angeles				Orange				Riverside				San Bernardino				Ventura				Imperial	
	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'93	'94	'96	'98	'96	'98
Bus/Rail Pass Sales	19%	11%	25%	16%	14%	5%	10%	31%	13%	16%	13%	18%	11%	5%	12%	8%	6%	-	12%	5%	0%	0%
Contest Prizes for Ridesharers	36	37	32	22	38	36	43	35	34	32	36	43	25	20	34	45	41	38	52	34	0	0
Monthly Allotment of Money to Reduce Commuting Costs	51	50	56	50	27	35	9	63	26	13	54	71	27	28	39	31	38	47	67	45	83	75

NA = Not Applicable in Orange County

## 6.14 TELECOMMUTING

Respondents, who are all working full-time outside of the home, were asked whether they had the opportunity to work at home instead of going to their regular work site. Little difference in opportunity to work at home is reported by county, and incidences have not changed significantly over the previous survey periods. Incidences by county can be found in Table 6.14. Among those given the opportunity, likelihood of seizing the opportunity continues to be very high in all counties though significantly lower than 1996 findings.

## 6.15 RECOGNITION OF 1-800-COMMUTE TELEPHONE NUMBER

Commuters were asked whether they have heard of the 1-800-COMMUTE telephone information

number. Responses to these questions can be found in Tables 6.15 and 6.16, first by home county and then by work county.

As can be seen, awareness of the 1-800-COMMUTE number is notably lower in Orange and Imperial Counties than in other counties. Awareness of the 1-800 COMMUTE number dropped from 1996 to 1998 in every county particularly in Orange (home county - 26% in 1998 vs. 40% in 1996; work county - 27% vs. 39%) and Imperial (home county - 9% vs. 16%; work county - 10% vs. 17%) counties. Recognition of 1-800-COMMUTE is much lower than its predecessor, a RIDE-number, which generated awareness levels of 60 percent across all counties. However, the 1-800-COMMUTE telephone number was implemented in 1994 in the aftermath of the Northridge earthquake. Frequency and consistency in any advertising message is needed to achieve higher levels of public awareness.

TABLE 6.14

OPPORTUNITY TO WORK AT HOME AND CURRENTLY WORK AT HOME						
	Work County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial *
Opportunity To Work At Home	9%	9%	7%	10%	8%	8%
Currently Work At Home**	87	78	78	75	70	76

\* Sample is too small for statistical reliability

\*\* Based on group with opportunity

TABLE 6.15

RECOGNITION OF 1-800-COMMUTE TELEPHONE INFORMATION NUMBER						
	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Heard Of 1-800-COMMUTE	39%	26%	33%	39%	36%	9%

TABLE 6.16

RECOGNITION OF 1-800-COMMUTE TELEPHONE INFORMATION NUMBER						
	Work County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Heard Of 1-800-COMMUTE	41%	27%	32%	34%	34%	10%

## 6.16 PERCEPTIONS OF FREEWAY TRAFFIC

Freeway users were asked to rate traffic on the freeways they commute on and to compare current traffic to what traffic was like one year ago. The following tables illustrate responses by county.

Compared to 1996 findings, more commuters in all counties are rating their freeway traffic as always bad and fewer commuters in all counties except Los Angeles and Imperial Counties are rating their freeway traffic as always good.

Los Angeles and Orange County freeway users perceive freeway traffic to be worse than do commuters in other counties. Imperial County commuters who use freeways to get to work are far more likely than commuters in other counties to perceive freeway traffic as always good.

Freeway commuters were also asked to compare current freeway traffic to freeway traffic one year ago. Table 6.18 shows commuters' assessments for each of the six counties.

Consistent with their perception of freeway traffic, compared to 1996, more commuters in all counties except Imperial County are rating freeway traffic as worse than one year ago while fewer commuters are rating freeway traffic as better than one year ago.

## 6.17 PERCEPTIONS OF SURFACE STREET TRAFFIC DURING THE COMMUTE

All survey respondents were asked to rate traffic on the surface streets they commute on and to compare current traffic to what traffic was like one year ago. Tables 6.19 and 6.20 illustrate responses by county.

Overall, the perception of surface street traffic is consistent with 1996 findings with over 30 percent of commuters in all counties rating surface street traffic as "mixed." Except in Imperial County, commuters in all other counties have better perceptions of surface street traffic than they do freeway traffic. Nonetheless, commuters in Imperial County are the most positive about surface street traffic.

Commuters were also asked to rate current street traffic compared to street traffic one year ago. The following table shows commuters' assessments by county. Commuters in each of the counties are most likely to say traffic is "the same" and least likely to say traffic is "better" than one year ago.

## 6.18 COMMUTE SATISFACTION

Commuters were asked to rate their commutes on a one to nine scale, where one represents the greatest level of dissatisfaction, and nine, the greatest level of

TABLE 6.17

PERCEPTIONS OF FREEWAY TRAFFIC						
	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Always Bad	18%	16%	15%	14%	7%	5%
More Often Bad	21	17	13	15	14	11
Mixed	27	38	26	29	28	20
More Often Good	20	20	24	26	33	19
Always Good	15	10	22	16	18	43

TABLE 6.18

COMPARISON OF CURRENT FREEWAY TRAFFIC TO ONE YEAR AGO						
	Home County					
Traffic Now Is:	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Better Than Year Ago	13%	21%	10%	8%	6%	15%
Same As Year Ago	49	43	51	48	53	60
Worse Than Year Ago	38	36	39	44	41	25



satisfaction. Average satisfaction levels by home county are slightly better than findings from 1996. In general, commuters are more satisfied with their commute now than they were in 1991.

## 6.19 COMMUTER STRESS

In order to explore the extent to which commuting adds stress to the lives of workers in the region, the State of the Commute includes questions on commute-related stress. Commuters were asked three questions: how often they are bothered by traffic, whether they need to wind down after their trip before starting work, and whether they feel their commute home has a negative impact on their home life.



Of the three questions, responses to the question concerning how often commuters say they are bothered by traffic suggest the highest level of stress, yet findings are consistent with 1996 survey results.

TABLE 6.19

PERCEPTIONS OF SURFACE STREET TRAFFIC						
	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Always Bad	6%	6%	8%	6%	6%	7%
More Often Bad	11	15	10	11	12	6
Mixed	39	39	33	35	31	30
More Often Good	28	25	25	26	26	19
Always Good	17	15	24	22	25	38

TABLE 6.20

COMPARISON OF CURRENT SURFACE STREET TRAFFIC TO ONE YEAR AGO						
	Home County					
Traffic Now Is:	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Better Than Year Ago	13%	6%	9%	8%	7%	11%
Same As Year Ago	58	63	58	58	60	64
Worse Than Year Ago	29	31	33	34	33	25

TABLE 6.21

OVERALL COMMUTE SATISFACTION RATING						
Home County	1991	1992	1993	1994	1996	1998
Los Angeles	5.8	5.9	6.5	6.6	6.5	6.7
Orange	5.6	6.0	6.2	6.4	6.6	6.6
Riverside	6.0	6.5	6.2	6.5	6.6	6.8
San Bernardino	5.9	6.4	6.3	6.8	6.5	6.8
Ventura	6.1	6.5	6.6	6.9	6.9	6.8
Imperial*	NA	NA	NA	NA	7.3	7.4

\* Imperial County was included for the first time in the 1996 study.

TABLE 6.22

MEASURES OF COMMUTER STRESS						
	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Bothered By Traffic: "Very Often"	17%	18%	15%	17%	15%	4%
Need To Wind Down Before Work: "Very Often"	12	9	9	11	9	5
Commute Home Has Negative Impact on Home Life: "Quite a Bit" "Very Much"	8	6	7	7	6	4

## 6.20 COMMUTER CONCERNS

Respondents were asked which factors they consider when choosing their means of transportation to work. As in years past, the most frequent response by far was convenience/flexibility. However, compared to 1996 findings, the level of response for convenience/flexibility as a factor for choosing a travel mode dropped across county lines. The only increase, across all counties except Imperial, occurred in "no access to alternative modes" as a factor for choosing how one gets to work. Commuters in Riverside and San Bernardino counties who have the longest commute distances are more concerned with commute costs than commuters in other counties but are less concerned than they have been in previous surveys.

## 6.21 CONSIDERATION OF ALTERNATIVE TRAVEL MODES

In order to monitor readiness to switch to alternative travel modes, drive-alone commuters were asked if they would try other means of transportation one or two days a week, just to see if they like it. Respondents were questioned on each alternative separately. Shares of commuters interested in trying the various alternatives by county are reported in Table 6.24.

Drive-alone commuters are most open to trying carpooling and vanpooling. Compared with 1996 findings, interest in all alternative modes remained about the same with the exception of bus which more drive-alone commuters are considering to use as an alternative mode.

TABLE 6.23

TOP 10 COMMUTER CONCERNS						
	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
1. Convenience	21%	26%	20%	23%	27%	16%
2. Travel Time	17	17	11	13	14	13
3. Reliability	16	13	21	19	16	16
4. No Access To Alternative Modes	13	11	11	10	14	13
5. Vehicle Availability At Work	9	9	9	10	9	5
6. Work Hours /Schedule	9	9	7	6	9	5
7. Having Vehicle Before/After Work	9	7	7	6	9	7
8. Commuting Cost	6	6	9	10	8	7
9. Comfort	7	7	5	5	6	6
10. Safety	4	2	5	4	5	10

TABLE 6.24

## WILLINGNESS TO CONSIDER USING AN ALTERNATIVE MODE

Would Consider	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Carpool	41%	41%	41%	41%	37%	42%
Vanpool (a)	30	41	25	34	32	29
Rail	14	16	14	18	17	14
Bus	16	15	14	15	14	24
Bicycle (b)	24	21	26	23	24	32
Walking (c)	28	24	34	25	29	40

(a) Among drive alone respondents with commutes of over 20 miles one way

(b) Among drive alone respondents with commutes of under 8 miles one way

(c) Among drive alone respondents with commutes of under 4 miles one way

## 6.22. COSTS OF COMMUTING

By county, respondents only differ slightly as to whether they have previously estimated their commute costs.

Estimates of monthly commute costs (asked of all respondents) continue to be highest on average among Riverside (\$118 ) and San Bernardino County commuters (\$109), and lowest among Imperial County commuters (\$85) (See Table 6.25).

## 6. 23 SUMMARY OF MAJOR CHARACTERISTICS BY COUNTY

Summary statistics reported in this section represent county residents regardless of whether they work in the same county or commute to work outside the county in which they live. The only exception is for employer programs, where awareness and participation rates are reported for commuters who work in each specific county.

a day; time reported is consistent with 1996 findings

- ◆ Fifty-four percent utilize freeways for commuting purposes
- ◆ Most likely to take an alternative route when traffic is jammed
- ◆ Highest awareness of bus availability (54%) of the six counties, up from 49 percent reported in 1996
- ◆ Self-reported HOV lane access by ridesharers is 54 percent
- ◆ Least likely to commute to another county to work (only 9%)
- ◆ Los Angeles County workers are among the most likely to be aware of the 1-800-Commute telephone information number
- ◆ Overall commute satisfaction improved slightly to 6.7 from 6.5 in 1996

TABLE 6.25

## COSTS OF COMMUTE

	Home County					
	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial
Have Evaluated Costs of Commute	37%	30%	36%	32%	32%	30%
Estimated Monthly Costs (Average)*	\$96	\$103	\$118	\$109	\$90	\$85

\* Based on answers from all respondents.

- ◆ Los Angeles commuters perceive their freeway traffic to be worse than do commuters in other counties



## Orange County

- ◆ Primary drive-alone rate increases slightly to 81 percent after a three-year down trend from 86 percent 1993 to 79 percent in 1996
- ◆ Lowest carpooling share at 11 percent
- ◆ Commute distance declined to 14.2 miles from 15.7 miles in 1996
- ◆ Nearly one in six (17%) commute to Los Angeles County
- ◆ Average round-trip commute time is 65 minutes

- ◆ Use of a freeway during the commute declined significantly to 55 percent after a three-year up trend from 53 percent in 1993 to 63 percent in 1996
- ◆ Highest rate of HOV lane availability (72%)
- ◆ Orange County commuters are much more likely to perceive the flow of traffic on freeways to be "better than a year ago" but are much less likely to perceive the flow of traffic on surface streets to be "better than a year ago"
- ◆ Lowest commute satisfaction level (6.6)
- ◆ Orange County commuters are among the least concerned about commuting costs and the most concerned about convenience
- ◆ Least likely to consider bicycling and walking to work on a trial basis; openness to carpooling increased again to 41 percent up from 35 percent in 1994 and 39 percent in 1996
- ◆ Orange commuters perceive their surface street traffic to be worse than do commuters in other counties

## Riverside County

- ◆ Primary drive-alone rate is 80 percent, up from 77 percent in 1996
- ◆ Carpooling remained at 16 percent, consistent with 1996 figure
- ◆ One-way commute distance down from the 24.1 miles reported in 1996, but still the second longest average commute distance (21.0 miles) of all six counties
- ◆ Average round-trip commute time is 76 minutes, down from 84 minutes reported in 1996
- ◆ Reported access to HOV lanes among ridesharers is 41 percent, down from 56 reported in 1996
- ◆ Nearly one in three (29%) of Riverside commuters travel to work outside of Riverside County
- ◆ Awareness of bus availability is at 30 percent, among the lowest of the six counties
- ◆ Commuters in Riverside County report the least opportunity to telecommute (7%)

- ◆ Least to cite travel time as a factor considered when choosing their travel mode
- ◆ Estimate of monthly commuting costs was highest on average (\$118)

## **San Bernardino County**

- ◆ Primary drive-alone rate is 79 percent
- ◆ Carpooling share increased slightly from 16 percent in 1996 to 17 percent in 1998, the highest of the six counties
- ◆ One-way trip distance declined slightly from 25.0 miles in 1996 to 22.4 miles but still is the highest of all counties
- ◆ Average round-trip commute time is 76 minutes, down from 84 minutes; San Bernardino and Riverside County commuters spend the most time commuting to and from work
- ◆ One third of residents (33%) travel outside of San Bernardino County to go to work, the highest of all counties
- ◆ Use of freeways for commuting purposes decreased slightly from 61 percent to 57 percent
- ◆ Nearly four in ten (39%) San Bernardino County commuters are aware of the 1-800-Commute telephone information number, among the highest of the six counties
- ◆ Commuters in San Bernardino County are more apt to perceive that freeway traffic is worse now than one year ago
- ◆ The overall commute satisfaction rating by San Bernardino County commuters increased from 6.5 in 1996 to 6.8 in 1998
- ◆ Commuters in San Bernardino County are highly likely to consider rail on a trial basis

## **Ventura County**

- ◆ Primary drive-alone rate is 79 percent, up slightly from 77 percent in 1996
- ◆ Alternative travel mode usage is 21 percent, with carpooling accounting for a 16 percent share
- ◆ Commute distance dropped from 17.8 miles to 15.9 miles
- ◆ Average round-trip commute time is 56 minutes which is slightly lower than 1996 findings

- ◆ Freeway usage for commuting purposes is consistent with 1996 findings (61%)
- ◆ Second only to Imperial County for the lowest HOV lane availability (24%); among the least likely to believe that HOV lanes would encourage them to rideshare (41%)
- ◆ Commute satisfaction rating of 6.8 is consistent with findings from 1996
- ◆ Convenience rates the highest as a major factor in travel mode choice

## **Imperial County**

- ◆ Primary drive-alone rate is 79 percent, lower than the 85 percent reported in 1996
- ◆ Alternative travel mode usage is 21 percent, with carpooling accounting for a 16 percent share
- ◆ One-way commute distance is the shortest of the six counties at 12.1 miles
- ◆ Shortest average round-trip commute time at 47 minutes
- ◆ Least likely (22%) to believe their travel time is longer now than a year ago. Lowest usage of freeways for commuting purposes (38%)
- ◆ Lowest usage of freeways for commuting purposes (38%)
- ◆ Lowest HOV lane availability (10%); least likely to use an alternate route when traffic is jammed
- ◆ Awareness of most employer transportation programs is lowest among commuters who work in Imperial County
- ◆ By far the lowest awareness of the 1-800-Commute telephone information number (9%)
- ◆ Imperial County commuters are much more likely to perceive that their freeway traffic is always good than are commuters in other counties and are the least likely to believe traffic is worse now than one year ago
- ◆ Likewise, Imperial County commuters are the most apt to perceive that their surface street traffic is always good and are the least likely to believe traffic is worse now than one year ago
- ◆ Overall commute satisfaction rating is highest among Imperial County commuters (7.4)
- ◆ Imperial County commuters report the lowest

level of stress during the commute

- ◆ Commuters in Imperial and Orange Counties are the least likely to have previously estimated commuting costs, but when estimated, average commuting cost is lowest of the six counties
- ◆ Imperial County commuters are the most willing to try carpooling, bus, bicycling, and walking on a trial basis

**APPENDIX A:**

**1998 State of the Commute Questionnaire**

# QUESTIONNAIRE WITH LOGIC & SKIP PATTERNS

(16:53:28 06 Nov 1997)

QUESTIONNAIRE = SCAGB  
VERSION : FINAL

```
*****
*          CODE BOX :          *
*          *                   *
* LT = LESS THAN      ( < ) *
* GT = GREATER THAN   ( > ) *
* EQ = EQUALS         ( = ) *
* NE = NOT EQUAL TO   ( # ) *
*****
```

GOOD EVENING, THIS IS \_\_\_\_\_ WITH SCR CALLING ON BEHALF OF THE  
SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS. WE ARE NOT SELLING  
ANYTHING. WE ARE JUST TALKING TO PEOPLE ABOUT THEIR COMMUTE SO  
TRANSPORTATION IN SOUTHERN CALIFORNIA CAN BE IMPROVED. I'D LIKE TO ASK YOU  
A FEW QUESTIONS. IT WILL TAKE ABOUT 15 MINUTES, CAN YOU HELP US OUT?

\*\*\*\*\*  
1. FIRST, HOW MANY PERSONS 18 YEARS OR OLDER IN YOUR HOUSEHOLD WORK OUTSIDE  
THE HOME 35 OR MORE HOURS PER WEEK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11 +
12. NONE
13. OTHER (OTHER LINE = 413)

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q1 IF Q<1> EQ "12" THEN GO END  
SKIP AFTER Q1 GO 235

\*\*\*\*\*  
2. HOW MANY PERSONS 18 YEARS OR OLDER WORK LESS THAN 35 HOURS PER WEEK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
10. 10
11. 11+
12. NONE
13. OTHER (OTHER LINE = 414)



(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q2 GO 7

\*\*\*\*\*

3. OF THE PERSONS WORKING FULL-TIME, I NEED TO SPEAK WITH THE PERSON  
WHO HAD THE MOST RECENT BIRTHDAY ? WOULD THAT BE YOU ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q3 IF Q<3> EQ "1" THEN GO 7

\*\*\*\*\*

4. MAY I PLEASE SPEAK WITH THAT PERSON ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q4 IF Q<4> EQ "1" THEN GO 237

\*\*\*\*\*

5. WHAT IS THIS PERSON'S NAME ?

\*\*\*\*\*

6. WHEN IS A GOOD TIME TO CALL ?

\*\*\* SURVEYOR NOTE: IF WE NEED TO CALL BACK, TERMINATE ON QUESTION "7",  
AND BE SURE TO CODE IT AS A CALL BACK !! \*\*\*

<<CUSTOM SKIP>> IF Q4 = "2" TERMINATE AND START AT Q237

\*\*\*\*\*

7. DO YOU CURRENTLY HOLD MORE THAN ONE JOB ?

1. YES
2. NO

\*\*\*SURVEYOR'S NOTE: IF YOU CURRENTLY HOLD MORE THAN ONE JOB, PLEASE  
ANSWER THE FOLLOWING QUESTIONS ONLY WITH RESPECT  
TO YOUR PRIMARY JOB

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

8. HOW MANY DAYS DO YOU USUALLY TRAVEL TO WORK IN A WEEK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. NONE

\*\*\*SURVEYOR'S NOTE: IF RESPONSE IS NONE ASK, "MAY I SPEAK WITH SOMEONE  
WHO WORKS OUTSIDE OF THE HOME AT LEAST 35 HOURS PER WEEK  
AND HAS THE MOST RECENT BIRTHDAY ? IF NO, TERMINATE

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q8 IF Q<8> EQ "8" THEN GO END

\*\*\*\*\*

9. NOW I'M GOING TO ASK YOU ABOUT HOW YOU GET TO WORK IN A TYPICAL WEEK. IF YOU USE MORE THAN ONE WAY TO GET TO WORK ON THE SAME DAY, LIKE TAKING BOTH THE BUS AND THE TRAIN, PLEASE TELL ME ABOUT ONLY THE ONE MODE YOU USE FOR THE LONGEST PART OF THE TRIP.

OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK, HOW MANY OF THESE DO YOU DRIVE ALONE?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

10. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK, HOW MANY OF THESE DO YOU CARPOOL INCLUDING WITH FAMILY MEMBERS?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

11. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK, HOW MANY OF THESE DO YOU VANPOOL ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

12. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK HOW MANY OF THESE DO YOU TAKE A PUBLIC BUS?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7

8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

13. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK,  
HOW MANY OF THESE DO YOU TAKE THE TRAIN OR RAIL?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

14. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK,  
HOW MANY OF THESE DO YOU TAKE A PRIVATE BUS?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

15. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK,  
HOW MANY OF THESE DO YOU RIDE A BICYCLE?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

16. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK,  
HOW MANY OF THESE DO YOU RIDE A MOTORCYCLE?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

17. OF THE <<COMMUTE.DAYS>> THAT YOU COMMUTE TO WORK IN A TYPICAL WORK WEEK,  
HOW MANY OF THESE DO YOU WALK OR JOG?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. NONE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

18. ABOUT HOW MANY MILES DO YOU TRAVEL TO WORK ONE-WAY ?

\*\*\* SURVEYOR INSTRUCTION: CODE "DON'T KNOW" OR REFUSED AS "999"

\*\*\*\*\*

19. \*\*\* DON'T READ TO RESPONDENT, CODE BASED ON ABOVE QUESTION \*\*\*\*

- |                   |                       |
|-------------------|-----------------------|
| 1. 0-3.5 MILES    | 4. 20.5 PLUS MILES    |
| 2. 3.6-7.5 MILES  | 5. DON'T KNOW/REFUSED |
| 3. 7.6-20.5 MILES |                       |

(DON'T READ PRE-CODED RESPONSES)

\*\*\*\*\*

20. HOW LONG HAVE YOU BEEN RIDING THE BUS ?

SKIP BEFORE Q20 IF Q<12> EQ "8" THEN GO 22

\*\*\*\*\*

21. MONTHS OR YEARS ?

1. MONTHS
2. YEARS

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q21 GO 232

\*\*\*\*\*

22. HOW LONG HAVE YOU BEEN BICYCLING TO WORK ?

SKIP BEFORE Q22 IF Q<15> EQ "8" THEN GO 24

\*\*\*\*\*

23. MONTHS OR YEARS ?

1. MONTHS
2. YEARS

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

24. HOW LONG HAVE YOU BEEN WALKING TO WORK ?

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q24 IF Q<17> EQ "8" THEN GO 26

\*\*\*\*\*

25. MONTHS OR YEARS ?

1. MONTHS
2. YEARS

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

26. HOW LONG HAVE YOU BEEN TAKING THE TRAIN ?

SKIP BEFORE Q26 IF Q<13> EQ "8" THEN GO 31

\*\*\*\*\*

27. MONTHS OR YEARS ?

1. MONTHS
2. YEARS

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

28. WHICH TRAIN DO YOU TAKE ?

1. BLUE LINE/LONG BEACH TO LOS ANGELES
2. AMTRAK FROM ORANGE COUNTY OR SAN DIEGO TO LOS ANGELES
3. METROLINK TO LOS ANGELES FROM SAN BERNARDINO, RIVERSIDE, MOORE PARK  
OR SANTA CLARITA
4. METROLINK TO ORANGE COUNTY FROM RIVERSIDE COUNTY
5. OTHER, PLEASE SPECIFY
9. DON'T KNOW/REFUSED (OTHER LINE = 300)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

29. HOW DO YOU USUALLY GET TO THE RAIL STATION ?

1. DRIVE
2. CARPOOL/VANPOOL
3. DROP-OFF
4. BICYCLE
5. WALK
6. BUS (ONLY FOR GETTING TO RAIL STATION)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

30. HOW MANY MINUTES DOES IT USUALLY TAKE YOU TO GET FROM YOUR HOUSE  
TO THE RAIL STATION ?

\*\*\*\*\*

31. HOW LONG HAVE YOU BEEN IN YOUR CURRENT CARPOOL OR VANPOOL?

SKIP BEFORE Q31 IF Q<10> EQ "8"  
AND Q<11> EQ "8" THEN GO 42

\*\*\*\*\*

32. MONTHS OR YEARS ?

1. MONTHS
2. YEARS

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

33. WITH WHOM DO YOU REGULARLY CARPOOL . . . ?

1. HOUSEHOLD MEMBERS
2. NON-HOUSEHOLD RELATIVES
3. CO-WORKERS
4. FRIENDS, ACQUAINTAINCES, NEIGHBORS

5. SOMEONE FROM A MATCHLIST/RIDEGUIDE

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

34. WAS THIS SOMEONE ORIGINALLY FROM A RIDEGUIDE OR A MATCHLIST OF POTENTIAL CARPOOL OR VANPOOL PARTNERS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q34 IF Q<33> NE "3"  
AND Q<33> NE "4" THEN GO 35

\*\*\*\*\*

35. ARE THE HOUSEHOLD MEMBER(S) YOU CARPOOL WITH...?

1. LESS THAN 16 YEARS OLD
2. SIXTEEN YEARS OLD OR OLDER
3. BOTH

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP BEFORE Q35 IF Q<33> NE "1" THEN GO 36

\*\*\*\*\*

36. HOW DO YOU LINK UP WITH YOUR CAR/VANPOOL PARTNER(S) ?

1. WHOEVER DRIVES, PICKS UP THE OTHER(S) AT HOME
2. WHOEVER IS NOT DRIVING, DRIVES TO THE DRIVERS HOME
3. EVERYBODY DRIVES TO A CENTRAL LOCATION (i.e., A PARK & RIDE LOT)
4. WE LIVE CLOSE ENOUGH THAT WE CAN WALK/BIKE TO EACH OTHERS HOMES
5. I GET DROPPED OFF BY SOMEONE IN MY HOUSEHOLD
6. OTHER
9. REFUSED/DON'T KNOW

\*\*\* SURVEYOR INSTRUCTION: IF ARRANGEMENT VARIES FROM DAY TO DAY,  
ASK ABOUT THE LAST DAY THEY CAR/VANPOOLED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP BEFORE Q36 IF Q<33> NE "2"  
AND Q<33> NE "3"  
AND Q<33> NE "4"  
AND Q<33> NE "5" THEN GO 41

\*\*\*\*\*

37. DO YOU HAVE TO TRAVEL OUT OF YOUR WAY ON THE HOME END OF YOUR TRIP ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q37 IF Q<37> NE "1" THEN GO 39

\*\*\*\*\*

38. APPROXIMATELY HOW FAR, IN MILES IS IT OUT OF YOUR WAY ?

\*\*\*\*\*  
39. DO YOU HAVE TO TRAVEL OUT OF YOUR WAY ON THE WORK END OF YOUR TRIP ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q39 IF Q<39> NE "1" THEN GO 41

\*\*\*\*\*  
40. APPROXIMATELY HOW MANY MILES IS IT OUT OF YOUR WAY ?

\*\*\*\*\*  
41. INCLUDING YOURSELF, HOW MANY PEOPLE IN TOTAL ARE USUALLY IN  
THE CAR/VAN WITH YOU ?

- |      |           |
|------|-----------|
| 1. 1 | 11. 11    |
| 2. 2 | 12. 12    |
| 3. 3 | 13. 13    |
| 4. 4 | 14. 14    |
| 5. 5 | 15. 15    |
| 6. 6 | 16. OTHER |
| 7. 7 |           |

- |        |  |
|--------|--|
| 8. 8   | ****SURVEYOR NOTE: DO NOT ENTER RESPONSES #1**** |
| 9. 9   |  |
| 10. 10 | (OTHER LINE = 418)                               |

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
42. HOW DID YOU GET TO WORK BEFORE YOU BEGAN TO <<MODE/RIDESHARE>> ?

- |                     |                        |
|---------------------|------------------------|
| 1. DROVE ALONE      | 7. BICYCLED            |
| 2. CARPOOLED        | 8. MOTORCYCLED         |
| 3. VANPOOLED        | 9. WALKED/JOGGED       |
| 4. RODE THE BUS     | 10. DID NOT WORK       |
| 5. TOOK THE TRAIN   | 11. OTHER              |
| 6. TOOK PRIVATE BUS | 99. DON'T KNOW-REFUSED |

SKIP BEFORE Q42: IF BUS/BICYCLE/WALK/TRAIN/CARPOOL/VANPOOL (Q20-Q32)  
ALL GT 1 YEAR GO 44

SKIP BEFORE Q42: IF Q9 PLUS Q16 = Q8 THEN GO 44 (OTHER LINE = 302)

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
43. WHAT MOTIVATED YOU TO BEGIN TO <<MODE/RIDESHARE>> ?

- |   |                        |
|---|------------------------|
| 1. CO-WORKER SUGGESTED IT                         | 15. OTHER              |
| 2. EMPLOYER/SUPERVISOR SUGGESTED                  | 99. DON'T KNOW/REFUSED |
| 3. I WAS OFFERED INCENTIVES/PRIZES/BENEFITS       |                        |
| 4. BETTER PARKING                                 |                        |
| 5. ADVERTISING SUGGESTED IT                       |                        |
| 6. GOT TIRED OF DRIVING ALONE                     |                        |
| 7. FOUND SOMEONE LIVING AND WORKING CLOSE BY      |                        |
| 8. SOMEBODY HELPED ME SET IT UP                   |                        |
| 9. SOMEBODY CALLED ME AND SUGGESTED IT            |                        |
| 10. RIDESHARE WEEK                                |                        |
| 11. TO REDUCE POLLUTION/SMOG/HELP THE ENVIRONMENT |                        |
| 12. TO SAVE MONEY/GAS                             |                        |

13. CAR PROBLEMS

14. GOT NEW OPTIONS-NEW BUS ROUTE/NEW TRAINS (OTHER LINE = 420)

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q43 GO 62

\*\*\*\*\*

44. AT SOME TIME IN THE PAST 12 MONTHS, HAVE YOU REGULARLY CARPOOLED,  
VANPOOLED, OR TAKEN A BUS OR TRAIN TO WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

\*\*\* SURVEYOR INSTRUCTION: IF ASKED, "REGULARLY" IS AT LEAST ONCE PER WEEK

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q44 IF Q<10> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<11> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<12> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<13> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<14> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<15> LT "8" THEN GO 62  
SKIP BEFORE Q44 IF Q<17> LT "8" THEN GO 62  
SKIP AFTER Q44 IF Q<44> NE "1" THEN GO 46

\*\*\*\*\*

45. WHAT MADE YOU STOP ?

- |                           |  |
|---------------------------|--|
| 1. WORK SCHEDULE CHANGED  | 8. TOO MUCH MONEY                        |
| 2. MOVED                  | 9. BUS ROUTE CHANGED                     |
| 3. COMPANY RELOCATED      | 10. NEEDED VEHICLE AT/AFTER WORK         |
| 4. CHANGED JOB/WORK SITE  | 11. BECAME UNRELIABLE                    |
| 5. OTHER RIDESHARERS QUIT | 12. GOT A CAR/GOT CAR FIXED              |
| 6. TOOK TOO MUCH TIME     | 13. DIDN'T GET ALONG W/OTHER RIDESHARERS |
| 7. TOO STRESSFUL          | 14. STOPPED GETTING MONEY FOR IT         |
|                           | 15. OTHER                                |
|                           | 99. DON'T KNOW / REFUSED                 |

\*\*\*SURVEYOR NOTE: PROBE AND CODE ALL THAT APPLY (OTHER LINE = 390)

(Multiple Response)

(DON'T READ PRE-CODED RESPONSES)

\*\*\*\*\*

46. WOULD YOU CONSIDER COMMUTING BY CARPOOL FOR 1 OR 2 DAYS A WEEK  
TO SEE IF YOU LIKE IT ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q46 IF Q<46> EQ "2" THEN GO 48

\*\*\*\*\*

47. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT  
TRY ?

1. DEFINITELY



- 2. MIGHT
- 3. NOT TRY
- 9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

48. WOULD YOU CONSIDER COMMUTING BY VANPOOL FOR 1 OR 2 DAYS A WEEK TO  
SEE IF YOU LIKE IT ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q48 IF Q<19> LT "4" THEN GO 50

SKIP AFTER Q48 IF Q<48> EQ "2" THEN GO 50

\*\*\*\*\*

49. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT  
TRY ?

- 1. DEFINITELY
- 2. MIGHT
- 3. NOT TRY
- 9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

50. WOULD YOU CONSIDER COMMUTING BY BUS FOR 1 OR 2 DAYS A WEEK TO  
SEE IF YOU LIKE IT ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q50 IF Q<50> EQ "2" THEN GO 52

\*\*\*\*\*

51. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT  
TRY ?

- 1. DEFINITELY
- 2. MIGHT
- 3. NOT TRY
- 9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

52. WOULD YOU CONSIDER COMMUTING BY TRAIN/RAIL FOR 1 OR 2 DAYS A  
WEEK TO SEE IF YOU LIKE IT ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q52 IF Q<52> EQ "2" THEN GO 54

\*\*\*\*\*

53. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT  
TRY ?

1. DEFINITELY
2. MIGHT
3. NOT TRY
9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

54. WOULD YOU CONSIDER COMMUTING BY BICYCLE FOR 1 OR 2 DAYS A WEEK TO SEE IF YOU LIKE IT ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q54 IF Q<19> NE "1"  
AND Q<19> NE "2"  
AND Q<19> NE "5" THEN GO 56

SKIP AFTER Q54 IF Q<54> EQ "2" THEN GO 56

\*\*\*\*\*

55. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT TRY ?

1. DEFINITELY
2. MIGHT
3. NOT TRY
9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

56. WOULD YOU CONSIDER WALKING OR JOGGING FOR 1 OR 2 DAYS A WEEK TO SEE IF YOU LIKE IT ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q56 IF Q<19> NE "1" THEN GO 58  
SKIP AFTER Q56 IF Q<56> EQ "2" THEN GO 58

\*\*\*\*\*

57. WOULD THIS BE SOMETHING YOU WOULD DEFINITELY TRY, OR SOMETHING YOU MIGHT TRY ?

1. DEFINITELY
2. MIGHT
3. NOT TRY
9. REFUSED / DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

58. WHY WOULDN'T YOU CONSIDER CARPOOLING ?

- |  |  |
|--|--|
| 1. NEED MY CAR AT WORK   | 13. LIKE TO BE INDEPENDENT OF OTHER PEOPLE |
| 2. NEED MY CAR BEFORE/AFTER WORK                               | 14. WORK SCHEDULE TOO IRREGULAR            |
| 3. WANT TO HAVE MY CAR IN CASE OVERTIME OR UNFORSEEN EMERGENCY | 15. TOO EXPENSIVE                          |
| 4. IT MIGHT NOT BE SAFE  | 16. DON'T KNOW OF ANYONE TO CARPOOL WITH   |
| 5. DON'T TRUST IT WOULD BE RELIABLE                            | 17. OTHER                                  |
| 6. IT WOULD TAKE TOO LONG                                      | 99. DON'T KNOW/REFUSED                     |
| 7. DISTANCE TOO SHORT  |  |

8. DISTANCE TOO LONG
9. HAVE HAD A BAD EXPERIENCE W/CP
10. DON'T SEE WHY I SHOULDN'T DRIVE  
MY CAR/TOO MUCH HASSLE
11. DON'T LIKE TO RIDE WITH STRANGERS
12. LIKE TO BE ALONE (OTHER LINE = 305)

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q58 IF Q<46> NE "2"  
AND Q<47> NE "3" THEN GO 59

\*\*\*\*\*

59. WHY WOULDN'T YOU CONSIDER VANPOOLING ?

- |   |   |
|---|---|
| 1. NEED CAR AT WORK   | 12. LIKE TO BE ALONE DURING<br>COMMUTE        |
| 2. NEED CAR BEFORE/AFTER WORK                                 | 13. LIKE TO BE INDEPENDENT<br>OF OTHER PEOPLE |
| 3. WANT CAR IN CASE OF EMERGENCY<br>/OVERTIME                 | 14. WORK SCHEDULE TOO<br>IRREGULAR            |
| 4. IT MIGHT NOT BE SAFE                                       | 15. TOO EXPENSIVE                             |
| 5. DON'T TRUST IT WOULD BE RELIABLE                           | 16. DON'T KNOW ANYONE<br>TO VANPOOL WITH      |
| 6. IT WOULD TAKE TOO LONG                                     | 17. NO CONVENIENT PICK-UP<br>/DROP-OFF NEAR   |
| 7. DISTANCE TOO SHORT   | 18. OTHER                                     |
| 8. DISTANCE TOO LONG  | 99. DON'T KNOW/REFUSED<br>(OTHER LINE = 306)  |
| 9. HAVE HAD A BAD EXPERIENCE WITH<br>VANPOOLING               |   |
| 10. DON'T SEE WHY I SHOULDN'T DRIVE<br>MY CAR/TOO MUCH HASSLE |   |
| 11. DON'T LIKE TO RIDE WITH STRANGERS                         |   |

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q59 IF Q<48> NE "2"  
AND Q<49> NE "3" THEN GO 60

\*\*\*\*\*

60. WHY WOULDN'T YOU CONSIDER TAKING THE BUS ?

- |  |  |
|--|--|
| 1. NEED MY CAR AT WORK                 | 16. NO BUS AVAILABLE/INCONVENIENT<br>BUS STOPS OR SCHEDULE |
| 2. NEED CAR BEFORE/AFTER WORK          | 17. TOO UNCOMFORTABLE/CROWDED                              |
| 3. WANT CAR FOR EMERGENCY/OVERTIME     | 18. TOO MUCH TIME BETWEEN BUSES                            |
| 4. IT MIGHT NOT BE SAFE                | 19. TOO MANY BUS TRANSFERS                                 |
| 5. DON'T TRUST IT WOULD BE RELIABLE    | 20. DON'T KNOW HOW   |
| 6. IT WOULD TAKE TOO LONG              | 21. BUSES TOO DIRTY  |
| 7. DISTANCE TOO SHORT                  | 22. DON'T FEEL SAFE ON BUS                                 |
| 8. DISTANCE TOO LONG                   | 23. DON'T FEEL SAFE GETTING<br>TO/FROM/OR AT BUS STOP      |
| 9. HAVE HAD A BAD EXPERIENCE           | 24. OTHER (OTHER LINE = 307)                               |
| 10. TOO MUCH HASSLE                    | 99. DON'T KNOW/REFUSED                                     |
| 11. DON'T LIKE TO DRIVE WITH STRANGERS | 98. NOT ASKED  |
| 12. LIKE TO BE ALONE DURING COMMUTE    | NOTE: WILL BE CODED AS 98 IF<br>NOT ASKED                  |
| 13. LIKE TO BE INDEPENDENT OF OTHERS   |  |
| 14. WORK SCHEDULE TOO IRREGULAR        |  |
| 15. TOO EXPENSIVE                      |  |

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q60 IF Q<50> NE "2"  
AND Q<51> NE "3" THEN GO 61

\*\*\*\*\*

61. WHY WOULDN'T YOU CONSIDER RIDING THE TRAIN ?

- |                                   |  |
|-----------------------------------|--|
| 1. NEED CAR AT WORK               | 12. LIKE TO BE ALONE DURING            |
| 2. NEED CAR BEFORE/AFTER WORK     | COMMUTE                                |
| 3. WANT CAR IN CASE OF OVERTIME   | 13. LIKE TO BE INDEPENDENT             |
| /EMERGENCY                        | OF OTHER PEOPLE                        |
| 4. IT MIGHT NOT BE SAFE           | 14. WORK SCHEDULE TOO                  |
| 5. DON'T TRUST IT WOULD BE        | IRREGULAR                              |
| RELIABLE                          | 15. NO TRAIN AVAILABLE/                |
| 6. IT WOULD TAKE TOO LONG         | INCONVENIENT STOPS/SCHEDULES           |
| 7. DISTANCE TOO SHORT             | 16. TOO UNCOMFORTABLE/CROWDED          |
| 8. DISTANCE TOO LONG              | 17. TOO MUCH TIME BETWEEN              |
| 9. HAVE HAD A BAD EXPERIENCE WITH | TRAINS                                 |
| TRAINS                            | 18. WOULD HAVE TO CHANGE TRAINS/BUSSES |
| 10. TOO MUCH HASSLE               | 19. DON'T KNOW HOW                     |
| 11. DON'T LIKE TO RIDE            | 20. TRAINS TOO DIRTY                   |
| WITH STRANGERS                    | 21. OTHER                              |
| 98. NOT ASKED                     | 99. DON'T KNOW/REFUSED                 |

(OTHER LINE = 308)

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q61 IF Q<52> NE "2"  
AND Q<53> NE "3" THEN GO 62

\*\*\*\*\*

62. IS THERE A BUS THAT YOU COULD TAKE TO GET TO WORK ?

1. YES
2. NO
8. REFUSED
9. DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP BEFORE Q62 IF Q<12> NE "8" THEN GO 63  
SKIP BEFORE Q62 IF Q<60> EQ "16" THEN GO 63

\*\*\*\*\*

63. DURING THE LAST WEEK DID YOU USE A FREEWAY TO TRAVEL TO WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q63 IF Q<63> NE "1" THEN GO 72

\*\*\*\*\*

64. IS THERE A SPECIAL CARPOOL LANE THAT CAN BE USED ONLY BY CARPOOLS,  
VANPOOLS OR BUSES ON THE FREEWAY THAT YOU USE TO TRAVEL TO OR  
FROM WORK (DOES NOT INCLUDE METERED ON-RAMPS) ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

SKIP AFTER Q64: IF Q8 = Q9 THEN GO 69

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q64 IF Q<64> GT "1" THEN GO 69

\*\*\*\*\*

65. DURING LAST WEEK DID YOU USE THIS CARPOOL LANE WHEN GOING TO WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q65 IF Q<65> NE "1" THEN GO 68

\*\*\*\*\*

66. DOES THE CARPOOL LANE SAVE YOU TIME IN GETTING TO WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q66 IF Q<66> NE "1" THEN GO 69

\*\*\*\*\*

67. HOW MANY MINUTES DOES THE CARPOOL LANE SAVE YOU ?

SKIP AFTER Q67 GO 70

\*\*\*\*\*

68. WHY DON'T YOU USE THE CARPOOL LANE ?

1. SAFETY CONCERNS
2. PREFER TO DRIVE ALONE
3. NOT ENOUGH PEOPLE IN CARPOOL TO QUALIFY
4. WOULD LIKE TO CARPOOL; CAN'T FIND OTHERS TO CARPOOL WITH
5. PHYSICAL LAYOUT MAKES GETTING IN AND OUT OF LANE DIFFICULT
6. DOES NOT SAVE ME ENOUGH TIME
7. TRAVEL DISTANCE ON FREEWAY TOO SHORT TO MAKE USING LANE WORTHWHILE
8. OTHER
9. DON'T KNOW/REFUSED (OTHER LINE = 309)

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

69. WOULD THE AVAILABILITY OF CARPOOL LANES ON A FREEWAY THAT YOU CAN USE TO TRAVEL TO OR FROM WORK ENCOURAGE YOU TO CARPOOL, VANPOOL OR TAKE THE BUS ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

70. DURING YOUR TYPICAL COMMUTE, WOULD YOU SAY THE FLOW OF TRAFFIC ON THE FREEWAYS YOU TRAVEL IS . . . ?

1. ALWAYS BAD
2. MORE OFTEN BAD
3. MIXED
4. MORE OFTEN GOOD
5. ALWAYS GOOD

9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

71. COMPARED TO YOUR COMMUTE A YEAR AGO WOULD YOU SAY THE FLOW OF TRAFFIC ON THE FREEWAYS NOW IS . . . ?

1. WORSE
2. THE SAME
3. OR BETTER
8. DON'T KNOW
9. REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

72. DURING YOUR TYPICAL COMMUTE, WOULD YOU SAY THE FLOW OF TRAFFIC ON THE SURFACE STREETS YOU TRAVEL IS . . . ?

1. ALWAYS BAD
2. MORE OFTEN BAD
3. MIXED
4. MORE OFTEN GOOD
5. ALWAYS GOOD
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

73. COMPARED TO YOUR COMMUTE A YEAR AGO WOULD YOU SAY THE FLOW OF TRAFFIC ON SURFACE STREETS NOW IS . . . ?

1. WORSE
2. THE SAME
3. OR BETTER
8. DON'T KNOW
9. REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

74. ON A SCALE FROM "1" TO "9", WITH "1" BEING THE LEAST SATISFACTORY AND "9" BEING THE MOST SATISFACTORY, HOW WOULD YOU RATE YOUR CURRENT COMMUTE OVERALL ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9

99. DON'T KNOW/REFUSED

\*\*\*\*\*

FOR THE NEXT GROUP OF QUESTIONS, IF THE RESPONDENT DID NOT WORK TODAY, ASK ABOUT THE LAST DAY THEY TRAVELED TO WORK.

75. TO GET A BETTER IDEA OF DAILY TRIP ACTIVITY, I'D LIKE TO ASK YOU ABOUT TRAVEL TODAY. AT WHAT TIME DID YOU LEAVE THE HOUSE TODAY TO GO TO WORK ?

\*\*\*SURVEYOR'S NOTE: DENOTE AM OR PM USING THE FOLLOWING FORMAT: 8:00 AM  
\*\*\*\*\*

76. ON YOUR WAY TO WORK, DID YOU STOP ANYWHERE, NO MATTER HOW BRIEFLY ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q76 IF Q<76> GT "1" THEN GO 96

\*\*\*\*\*

77. HOW MANY STOPS DID YOU MAKE ?

\*\*\*\*\*

78. WHAT WAS THE PURPOSE OF THIS/THESE STOP(S) ? (KEEP ASKING  
"WERE THERE ANY OTHER STOPS" UNTIL RESPONDENT SAYS "NO")

- |                                 |   |
|---------------------------------|---|
| 1. TOOK CHILD TO DAYCARE        | 8. VISITED FRIENDS/RELATIVES-SOCIALIZED |
| 2. TOOK CHILD TO SCHOOL         | 9. WENT SHOPPING/BOUGHT GROCERIES       |
| 3. PICKED UP OR DROPPED CAR     | 10. PICKED UP/DELIVERED GOODS           |
| VANPOOLER/CHANGED TRAVEL MODE   | 11. WENT TO MEETINGS                    |
| 4. WENT TO BANK                 | 12. BOUGHT GASOLINE                     |
| 5. WENT TO ENTERTAINMENT        | 13. WENT TO SECOND JOB                  |
| /RECREATION                     | 14. POST OFFICE                         |
| 6. WENT TO CLEANERS/HAIRDRESSER | 15. WORK RELATED STOP                   |
| DOCTOR/DENTIST                  | 16. OTHER (OTHER LINE = 310)            |
| 7. WENT TO EAT                  | 99. REFUSED/DON'T KNOW                  |

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

79. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.1>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONE TIME PER WEEK ON AVERAGE

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

80. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.2>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q80 IF Q78 NUMBER OF RESPONSES < "2" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

81. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.3>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q81 IF Q78 NUMBER OF RESPONSES < "3" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

82. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.4>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q82 IF Q78 NUMBER OF RESPONSES < "4" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

83. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.5>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q83 IF Q78 NUMBER OF RESPONSES < "5" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

84. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.6>> ON THE WAY TO WORK ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6



7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q84 IF Q78 NUMBER OF RESPONSES < "6" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

85. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.7>> ON THE WAY TO WORK ?

1. 1

2. 2

3. 3

4. 4

5. 5

6. 6

7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

SKIP BEFORE Q85 IF Q78 NUMBER OF RESPONSES < "7" THEN GO 96

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

86. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP FOR <<STOP.8+>> ON THE WAY TO WORK ?

1. 1

2. 2

3. 3

4. 4

5. 5

6. 6

7. 7

8. LESS THAN ONE TIME PER WEEK ON AVERAGE

\*\*\*\* SURVEYOR NOTE: IF MULTIPLE STOP REASONS LISTED FOR Q86, THEN THE RESPONSE EQUALS THE NUMBER OF DAYS THEY STOPPED FOR ANY OF THESE REASONS \*\*\*\*

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q86 GO 96

\*\*\*\*\*

96. WHAT TIME DID YOU ARRIVE AT WORK TODAY ?

\*\*\*SURVEYOR NOTE: DENOTE AM OR PM USING THE FOLLOWING FORMAT: 8:00 AM

\*\*\*SURVEYOR NOTE: IF MORE THAN ONCE IN DAY, THEN FIRST TIME

\*\*\*\*\*

97. WHAT TIME DID YOU LEAVE WORK TODAY TO GO HOME ?

\*\*\*SURVEYOR NOTE: DENOTE AM OR PM USING THE FOLLOWING FORMAT: 8:00 AM

\*\*\*SURVEYOR NOTE: IF MORE THAN ONCE IN DAY, THEN LAST TIME

\*\*\*\*\*

98. ON YOUR WAY HOME DID YOU STOP ANYWHERE, NO MATTER HOW BRIEFLY ?

1. YES

2. NO

9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q98 IF Q<98> GT "1" THEN GO 118

\*\*\*\*\*  
99. HOW MANY STOPS DID YOU MAKE ?

\*\*\*\*\*  
100. WHAT WAS THE PURPOSE OF THIS/THESE STOP(S) ?

- |   |                        |
|---|------------------------|
| 1. PICKED UP CHILD FROM DAYCARE                               | 16. OTHER              |
| 2. PICKED UP CHILD FROM SCHOOL                                | 99. REFUSED/DON'T KNOW |
| 3. PICKED UP OR DROPPED OFF CAR/VANPOOLER/CHANGED TRAVEL MODE |                        |
| 4. WENT TO BANK   |                        |
| 5. WENT TO ENTERTAINMENT/RECREATION                           |                        |
| 6. WENT TO CLEANERS/HAIRDRESSER/DOCTOR/DENTIST                |                        |
| 7. WENT TO EAT  |                        |
| 8. VISITED FRIENDS/RELATIVES-SOCIALIZED                       |                        |
| 9. WENT SHOPPING/BOUGHT GROCERIES                             |                        |
| 10. PICKED UP/DELIVERED GOODS                                 |                        |
| 11. WENT TO MEETINGS  |                        |
| 12. BOUGHT GASOLINE   |                        |
| 13. WENT TO A SECOND JOB                                      |                        |
| 14. POST OFFICE   |                        |
| 15. WORK RELATED STOP   | (OTHER LINE = 311)     |

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
101. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.1>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
102. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.2>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q102 IF NUMBER OF RESPONSES FOR Q100 < "2" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

103. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.3>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q103 IF NUMBER OF RESPONSES FOR Q100 < "3" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

104. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.4>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q104 IF NUMBER OF RESPONSES FOR Q100 < "4" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

105. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.5>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q105 IF NUMBER OF RESPONSES FOR Q100 < "5" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

106. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.6>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q106 IF NUMBER OF RESPONSES FOR Q100 < "6" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

107. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.7>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

SKIP BEFORE Q107 IF NUMBER OF RESPONSES FOR Q100 < "7" THEN GO 118

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

108. ON AVERAGE, HOW MANY DAYS A WEEK DO YOU STOP ON THE WAY HOME FOR  
<<STOP2.8+>> ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. LESS THAN ONCE PER WEEK

\*\*\*\* SURVEYOR NOTE: IF MULTIPLE STOP REASONS LISTED FOR Q86, THEN THE  
RESPONSE EQUALS THE NUMBER OF DAYS THEY STOPPED  
FOR ANY OF THESE REASONS \*\*\*\*

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q108 GO 118

\*\*\*\*\*

118. WHAT TIME DID YOU ARRIVE HOME FROM WORK TODAY ?

\*\*\*SURVEYOR NOTE: DENOTE AM OR PM USING THE FOLLOWING FORMAT: 8:00 PM  
\*\*\*\*\*  
NOW WE'RE GOING TO SWITCH FROM YOUR MOST RECENT TRIP AND ASK YOU ABOUT  
YOUR TYPICAL OR USUAL TRIP.

119. ABOUT HOW MANY MINUTES DOES IT USUALLY TAKE YOU TO TRAVEL TO WORK ?

\*\*\*SURVEYOR NOTE: RECORD TIME IN MINUTES, NOT HOURS\*\*\*

\*\*\*\*\*

120. HOW WOULD YOU RATE THE ON-TIME RELIABILITY OF YOUR PRIMARY MODE  
OF TRANSPORTATION TO WORK ON A SCALE OF "1" TO "9"  
WHERE "1" IS NOT AT ALL RELIABLE AND "9" IS COMPLETELY RELIABLE ?

1. 1
2. 2
3. 3
4. 4
5. 5

- 6. 6
- 7. 7
- 8. 8
- 9. 9
- 99. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

121. ABOUT HOW MANY MINUTES DOES IT USUALLY TAKE YOU TO TRAVEL  
HOME FROM WORK ?

\*\*\* SURVEYOR NOTE: RECORD TIME IN MINUTES, NOT HOURS \*\*\*

\*\*\*\*\*

122. DO YOU FEEL YOUR COMMUTE TIME IS LONGER NOW THAN IT WAS ONE YEAR AGO ?

- 1. YES
- 2. NO
- 8. DON'T KNOW
- 9. REFUSED

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

123. HOW MANY DAYS DO YOU NEED YOUR CAR FOR BUSINESS TRIPS  
DURING WORK HOURS ?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

124. AND HOW MANY DAYS DO YOU NEED YOUR CAR AT WORK FOR PERSONAL TRIPS  
DURING WORK HOURS ?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7
- 8. NONE

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

125. SO IN TOTAL, HOW MANY DAYS A WEEK DO YOU NEED YOUR CAR AT WORK FOR BOTH  
BUSINESS AND PERSONAL TRIPS DURING WORK HOURS ?

- 1. 1
- 2. 2
- 3. 3
- 4. 4
- 5. 5
- 6. 6
- 7. 7

8. NONE

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

126. DO YOU PAY FOR PARKING AT YOUR WORK SITE ?

1. YES, PAY TOTALLY
2. YES, PAY PARTIALLY
3. NO, RECEIVE FREE PARKING
9. REFUSED/DON'T KNOW

\*\*\*SURVEYOR'S NOTE: DENOTE DIFFERENCE OF TOTALLY OR PARTIALLY\*\*\*

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q126 IF Q<126> GE "3" THEN GO 129

\*\*\*\*\*

127. HOW MUCH DO YOU PAY FOR PARKING ?

\*\*\*SURVEYOR NOTE: IN THIS FORMAT "#.##" OR "##.##" OR "###.##"

\*\*\*\*\*

128. DAY/WEEK/MONTH

1. DAY
2. WEEK
3. MONTH

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

129. DOES YOUR EMPLOYER PAY FOR AT LEAST A PORTION OF YOUR PARKING COST ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q129 IF Q<126> NE "2"

AND Q<126> NE "3" THEN GO 130

\*\*\*\*\*

130. DURING THE LAST WEEK DID YOU USE A PARK-AND-RIDE LOT WHEN YOU TRAVELED TO WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

131. AS PART OF YOUR EMPLOYMENT, DO YOU HAVE THE OPPORTUNITY TO WORK AT HOME INSTEAD OF GOING TO YOUR REGULAR PLACE OF WORK ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

\*\*\*SURVEYOR'S NOTE: WORKING AT HOME AFTER HOURS DOES NOT QUALIFY

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q131 IF Q<131> NE "1" THEN GO 133

\*\*\*\*\*

132. APPROXIMATELY HOW MANY DAYS PER MONTH DO YOU WORK AT HOME INSTEAD OF AT YOUR REGULAR PLACE OF WORK ?

\*\*\*\*SURVEYOR'S NOTE: ASSUME ONE MONTH = FOUR WEEKS (I.E. 28 DAYS)

\*\*\*\*\*

133. DOES YOUR EMPLOYER OFFER FLEXIBLE WORK HOURS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q133 IF Q<133> NE "1" THEN GO 135

\*\*\*\*\*

134. ARE YOU CURRENTLY ON THIS FLEXIBLE WORK SCHEDULE ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

135. DOES YOUR EMPLOYER OFFER A 4/40 WORK WEEK (FOUR DAY WORK WEEK WORKING 10 HOURS A DAY) ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q135 IF Q<135> NE "1" THEN GO 137

\*\*\*\*\*

136. ARE YOU CURRENTLY ON THIS 4/40 WORK WEEK ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

137. DOES YOUR EMPLOYER OFFER A 9/80 WORK WEEK (9 HOUR DAY WITH A DAY OFF EVERY OTHER WEEK) ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q137 IF Q<137> NE "1" THEN GO 139

\*\*\*\*\*

138. ARE YOU CURRENTLY ON THIS 9/80 WORK WEEK SCHEDULE ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
139. DOES YOUR EMPLOYER OFFER A 3/36 WORK WEEK (THREE 12-HOUR WORK DAYS) ?

- 1. YES
- 2. NO
- 9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q139 IF Q<139> NE "1" THEN GO 141

\*\*\*\*\*  
140. ARE YOU CURRENTLY ON THIS 3/36 WORK WEEK SCHEDULE ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
141. DOES YOUR EMPLOYER OFFER OTHER ALTERNATIVE WORK SCHEDULES  
THAT I HAVEN'T MENTIONED ?

- 1. YES
- 2. NO
- 9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q141 IF Q<141> NE "1" THEN GO 143

\*\*\*\*\*  
142. ARE YOU CURRENTLY ON THIS ALTERNATIVE WORK SCHEDULE ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
143. DOES YOUR EMPLOYER ASSIST IN FORMING CARPOOLS OR VANPOOLS ?

- 1. YES
- 2. NO
- 9. DON'T KNOW REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q143 IF Q<143> NE "1" THEN GO 146

\*\*\*\*\*  
144. HAVE YOU USED THEIR ASSISTANCE IN FORMING A CARPOOL OR VANPOOL ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q144 IF Q<144> EQ "2" THEN GO 146

\*\*\*\*\*  
145. HAS THEIR ASSISTANCE IN HELPING FORM CARPOOLS OR VANPOOLS INFLUENCED HOW  
YOU GET TO WORK ?

- 1. YES



2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

146. DOES YOUR EMPLOYER PROVIDE RIDESHARE INFORMATION ?

- 1. YES
- 2. NO
- 9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q146 IF Q<146> NE "1" THEN GO 149

\*\*\*\*\*

147. HAVE YOU USED THEIR RIDESHARE INFORMATION ?

- 1. YES
- 2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q147 IF Q<147> EQ "2" THEN GO 149

\*\*\*\*\*

148. HAS PROVIDING YOU WITH RIDESHARE INFORMATION INFLUENCED HOW YOU GET TO WORK ?

- 1. YES
- 2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

149. DOES YOUR EMPLOYER PROVIDE PREFERRED PARKING SPACES FOR RIDESHARING ?

- 1. YES
- 2. NO
- 9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q149 IF Q<149> NE "1" THEN GO 152

\*\*\*\*\*

150. HAVE YOU USED THE PREFERRED PARKING SPACES ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q150 IF Q<150> EQ "2" THEN GO 152

\*\*\*\*\*

151. HAS PROVIDING YOU WITH PREFERRED PARKING SPACES INFLUENCED HOW YOU GET TO WORK ?

- 1. YES
- 2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

152. DOES YOUR EMPLOYER PROVIDE FREE OR LOW COST PARKING FOR RIDESHARERS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q152 IF Q<152> NE "1" THEN GO 155

\*\*\*\*\*

153. HAVE YOU USED THE FREE OR LOW COST PARKING FOR RIDESHARERS ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q153 IF Q<153> EQ "2" THEN GO 155

\*\*\*\*\*

154. HAS PROVIDING YOU WITH FREE OR LOW COST PARKING SPACES INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

155. DOES YOUR EMPLOYER GIVE MONEY TO THOSE WHO RIDESHARE ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q155 IF Q<155> NE "1" THEN GO 159

\*\*\*\*\*

156. HOW MUCH MONEY PER MONTH ?

\*\*\* SURVEYOR NOTE: IN THIS FORMAT "#.## OR ##.## OR ###.##"

SKIP BEFORE Q156 IF Q<155> NE "1" THEN GO 159

\*\*\*\*\*

157. HAVE YOU RECEIVED ANY MONEY FROM YOUR EMPLOYER AS PART OF THE RIDESHARE PROGRAM ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q157 IF Q<157> EQ "2" THEN GO 159

\*\*\*\*\*

158. HAS RECEIVING MONEY FROM YOUR EMPLOYER FOR RIDESHARING INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

159. DOES YOUR EMPLOYER GIVE ALL EMPLOYEES A MONTHLY ALLOTMENT OF MONEY TO

REDUCE COMMUTING COSTS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q159 IF Q<159> NE "1" THEN GO 162

\*\*\*\*\*  
160. HAVE YOU RECEIVED A MONTHLY ALLOTMENT OF MONEY FROM YOUR EMPLOYER TO  
REDUCE COMMUTING COSTS ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q160 IF Q<160> EQ "2" THEN GO 162

\*\*\*\*\*  
161. HAS RECEIVING A MONTHLY ALLOTMENT OF MONEY FROM YOUR EMPLOYER TO REDUCE  
COMMUTING COSTS INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
162. DOES YOUR EMPLOYER SELL BUS OR RAIL PASSES ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q162 IF Q<162> NE "1" THEN GO 165

\*\*\*\*\*  
163. HAVE YOU BOUGHT A BUS OR RAIL PASS THROUGH YOUR EMPLOYER ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q163 IF Q<163> EQ "2" THEN GO 165

\*\*\*\*\*  
164. HAS SELLING BUS OR RAIL PASSES INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
165. DOES YOUR EMPLOYER PROVIDE BUS OR RAIL ROUTES AND SCHEDULES  
INFORMATION ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q165 IF Q<165> NE "1" THEN GO 168

\*\*\*\*\*  
166. HAVE YOU USED THE BUS OR RAIL ROUTES AND SCHEDULES INFORMATION ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q166 IF Q<166> EQ "2" THEN GO 168

\*\*\*\*\*  
167. HAS PROVIDING BUS OR RAIL ROUTES AND SCHEDULES INFORMATION  
INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
168. DOES YOUR EMPLOYER REGISTER EMPLOYEES WITH A RIDESHARE AGENCY ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q168 IF Q<168> NE "1" THEN GO 171

\*\*\*\*\*  
169. HAVE YOU REGISTERED WITH A RIDESHARE AGENCY THROUGH YOUR EMPLOYER ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q169 IF Q<169> EQ "2" THEN GO 171

\*\*\*\*\*  
170. HAS REGISTERING WITH A RIDESHARE AGENCY INFLUENCED HOW YOU GET  
TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
171. DOES YOUR EMPLOYER HAVE CONTESTS/PRIZES FOR RIDESHARERS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q171 IF Q<171> NE "1" THEN GO 174

\*\*\*\*\*  
172. HAVE YOU ENTERED A CONTEST WITH PRIZES FOR RIDESHARERS ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q172 IF Q<172> EQ "2" THEN GO 174

\*\*\*\*\*

173. HAS ENTERING RIDESHARE CONTESTS OR RECEIVING PRIZES INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

174. DOES YOUR EMPLOYER ALLOW RIDESHARERS THE USE OF A COMPANY CAR DURING THE DAY TO RUN PERSONAL ERRANDS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q174 IF Q<174> NE "1" THEN GO 177

\*\*\*\*\*

175. HAVE YOU USED A COMPANY CAR TO RUN PERSONAL ERRANDS ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q175 IF Q<175> EQ "2" THEN GO 177

\*\*\*\*\*

176. HAS THE USE OF A COMPANY CAR TO RUN PERSONAL ERRANDS INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

177. DOES YOUR EMPLOYER GUARANTEE A RIDE HOME IN CASE OF EMERGENCY ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q177 IF Q<177> NE "1" THEN GO 180

\*\*\*\*\*

178. HAVE YOU USED THE GUARANTEED RIDE HOME ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
179. HAS THE GUARANTEED RIDE HOME INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
180. ARE THERE ANY OTHER SERVICES OR INCENTIVES THAT YOUR EMPLOYER PROVIDES TO ENCOURAGE EMPLOYEES TO RIDESHARE THAT I HAVE NOT MENTIONED BEFORE ? BY RIDESHARING I MEAN CARPOOLING, VANPOOLING, RIDING THE BUS OR TRAIN, WALKING OR BIKING TO WORK.

1. YES
2. NO
9. DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q180 IF Q<180> NE "1" THEN GO 184

\*\*\*\*\*  
181. WHAT ARE THE SERVICES OR INCENTIVES ?

\*\*\*\*\*  
182. HAVE YOU USED THESE SERVICES OR INCENTIVES ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q182 IF Q<182> EQ "2" THEN GO 184

\*\*\*\*\*  
183. HAVE THESE SERVICES INFLUENCED HOW YOU GET TO WORK ?

1. YES
2. NO

\*\*\*\*\*  
184. WOULD YOU STOP RIDESHARING IF YOUR EMPLOYER ELIMINATED THE RIDESHARING SERVICES OR INCENTIVES THAT THEY CURRENTLY PROVIDE ?

1. YES
2. NO

SKIP BEFORE Q184: IF Q143, Q146, Q149, Q152, Q155, Q159, Q162, Q165, Q168, Q171, Q174, Q177, AND Q180 GT "1" THEN GO 185

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
185. WHAT FACTORS DO YOU CONSIDER WHEN CHOOSING YOUR MEANS OF TRANSPORTATION TO WORK ?

- |  |   |
|--|---|
| 1. COMMUTING COSTS                     | 12. NOT BEING DEPENDENT ON OTHERS                           |
| 2. COMFORT/RELAXATION                  | 13. CONVENIENCE/FLEXIBILITY                                 |
| 3. TRAVEL TIME TO WORK                 | 14. HAVING VEHICLE AVAILABLE TO TAKE KIDS TO DAYCARE/SCHOOL |
| 4. PRIVACY                             | 15. INCENTIVES OFFERED BY EMPLOYER                          |
| 5. ENJOY TALKING TO SOMEONE            | 16. OTHER WAYS ARE IMPRACTICAL                              |
| 6. HAVING VEHICLE DURING WORK          | 17. SAVES ENERGY/FUEL                                       |
| 7. HAVING VEHICLE BEFORE/AFTER WORK    | 18. RELIABILITY/DEPENDABILITY                               |
| 8. REDUCING POLLUTION/CLEAN AIR        | 19. WORK HOURS/WORK SCHEDULE                                |
| 9. SAFETY                              | 20. WANT TO GET HOME AT ANY TIME                            |
| 10. HAVING NO OTHER WAY TO GET TO WORK |   |

11. STRESS 21. OTHER (OTHER LINE = 362)  
\*\*\* SURVEYOR NOTE: PROMPT AT LEAST TWICE, "WHAT ELSE" UNTIL "NOTHING"

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
186. WHAT DO YOU MEAN BY CONVENIENCE AND FLEXIBILITY ?

1. DON'T HAVE TO PLAN OR COORDINATE WITH OTHERS
2. CAN COME AND GO AS I PLEASE
3. ALLOWS ME TO CHANGE PLANS, ADD STOPS ETC. AS I PLEASE
4. RELIABLE AND DEPENDABLE
5. CAN GET HOME IN THE EVENT OF AN EMERGENCY
6. ONLY TIME OF THE DAY TO BE ALONE
7. DON'T HAVE TO GO TO ANOTHER LOCATION
8. FASTEST WAY TO TRAVEL
9. OTHER
99. DON'T KNOW / REFUSED (OTHER LINE = 415)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP BEFORE Q186 IF Q<185> NE "13" THEN GO 187

\*\*\*\*\*  
187. AMONG THE FACTORS MENTIONED, WHICH ONE IS MOST (SECOND MOST, THIRD MOST) IMPORTANT WHEN CHOOSING YOUR MEANS OF TRANSPORTATION TO WORK ?

- |  |                                    |
|--|------------------------------------|
| 1. COMMUTING COSTS                     | 12. NOT BEING DEPENDENT ON OTHER   |
| 2. COMFORT/RELAXATION                  | 13. CONVENIENCE/FLEXIBILITY        |
| 3. TRAVEL TIME TO WORK                 | 14. HAVING VEHICLE AVAILABLE TO    |
| 4. PRIVACY                             | TAKE KIDS TO DAYCARE/SCHOOL        |
| 5. ENJOY TALKING TO SOMEONE            | 15. INCENTIVES OFFERED BY EMPLOYER |
| 6. HAVING VEHICLE DURING WORK          | 16. OTHER WAYS ARE IMPRACTICAL     |
| 7. HAVING VEHICLE BEFORE/AFTER WORK    | 17. SAVES ENERGY/FUEL              |
| 8. REDUCING POLLUTION/CLEAN AIR        | 18. RELIABILITY/DEPENDABILITY      |
| 9. SAFETY                              | 19. WORK HOURS/WORK SCHEDULE       |
| 10. HAVING NO OTHER WAY TO GET TO WORK | 20. WANT TO GET HOME AT ANY TIME   |
| 11. STRESS                             | 21. OTHER (OTHER LINE = 416)       |

\*\*\*SURVEYOR NOTE: ASK SEPARATELY FOR 1ST, 2ND AND 3RD MOST IMPORTANT  
SKIP BEFORE Q 187: IF # RESPONSES FOR Q185 EQ "1" THEN GO 188

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
188. HAVE YOU EVER CALCULATED THE COST OF YOUR CURRENT COMMUTE ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
189. HOW MUCH WOULD YOU ESTIMATE IS YOUR CURRENT TOTAL COMMUTE COST PER MONTH ?

SURVEYOR NOTE: FORMAT #.## OR ##.## OR ###.##

\*\*\*\*\*  
190. WHAT DID YOU INCLUDE IN THIS ESTIMATE ?

1. GASOLINE

2. INSURANCE
3. MAINTENANCE/REPAIR
4. PARKING
5. DEPRECIATION
6. OTHER (OTHER LINE = 364)

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
191. HOW OFTEN DO YOU FEEL BOTHERED BY TRAFFIC CONGESTION IN COMMUTING TO  
OR FROM WORK, IS IT . . . ?

1. NEVER
2. HARDLY EVER
3. SOMETIMES
4. FAIRLY OFTEN
5. VERY OFTEN
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
192. AFTER YOUR COMMUTE TO WORK, HOW OFTEN DO YOU FEEL A NEED TO WIND DOWN  
AND RELAX BEFORE STARTING WORK ?

1. NEVER
2. HARDLY EVER
3. SOMETIMES
4. FAIRLY OFTEN
5. VERY OFTEN
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
193. SOME PEOPLE SAY THAT DEALING WITH TRAFFIC ON THEIR COMMUTE HOME FROM  
WORK HAS A NEGATIVE EFFECT ON THEIR HOME LIFE. TO WHAT EXTENT IS THIS  
TRUE FOR YOU ?

1. NOT AT ALL
2. A LITTLE
3. SOMEWHAT
4. QUITE A BIT
5. VERY MUCH
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
194. WHEN YOU COMMUTE TO OR FROM WORK AND THE TRAFFIC JAMS UP, DO YOU EVER  
DECIDE TO CHANGE YOUR USUAL ROUTE AND TAKE AN ALTERNATE ROUTE ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
195. IF RADIO TRAFFIC REPORTS INCLUDED ALTERNATE ROUTE INFORMATION IN THEIR  
BROADCASTS, HOW LIKELY WOULD YOU BE TO USE AN ALTERNATE ROUTE ?  
WOULD YOU BE . . . ?



1. VERY LIKELY
2. SOMEWHAT LIKELY
3. MIXED
4. SOMEWHAT UNLIKELY
5. VERY UNLIKELY
6. DON'T LISTEN TO THE RADIO
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
 196. HAVE YOU HEARD, SEEN, OR READ ANY ADVERTISING FOR RIDESHARING IN THE PAST 6 MONTHS ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP AFTER Q196 IF Q<196> NE "1" THEN GO 200

\*\*\*\*\*  
 197. WHERE DID YOU SEE OR HEAR THIS ADVERTISING ?

1. NEWSPAPER
2. RADIO
3. TELEVISION
4. AT WORK
5. IN THE MAIL
6. ON BILLBOARDS
7. BLUE FREEWAY SIGNS (EG. 1-800-286-RIDE)
8. RECEIVED A PHONE CALL
9. AT A BUS STOP / ON A BENCH
10. ON THE SIDE OF A BUS/VANS
11. OTHER
12. RIDESHARE WEEK
99. REFUSED/DON'T KNOW (OTHER LINE = 410)

(Multiple Response)

(DON'T READ PRE-CODED RESPONSES)

\*\*\*\*\*  
 198. WHAT MESSAGE DO YOU RECALL FROM THIS ADVERTISING ?

1. NONE
2. THAT YOU SHOULD RIDESHARE [PROBE FOR WHY]
3. THAT NEW TRAINS ARE COMING
4. THAT YOU CAN CALL FOR CAR OR VANPOOL INFO
5. CALL 1-800-COMMUTE
6. IT SAVES MONEY
7. IT SAVES TIME
8. IT IS LESS STRESSFUL
9. TEAM RIDESHARE
10. EMPLOYER WOULD GIVE ME CERTAIN BENEFITS
11. IT WOULD HELP THE ENVIRONMENT
12. IT REDUCES TRAFFIC
13. IT SAVES WEAR AND TEAR ON THE CAR
14. OTHER
99. REFUSED/DON'T KNOW (OTHER LINE = 411)

(Multiple Response)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

204. HAVE YOU RECEIVED A MATCHLIST OR RIDEGUIDE WHICH IS A FREE PERSONALIZED  
COMMUTE PLANNER CONTAINING ALL OF A COMMUTER'S TRANSPORTATION OPTIONS IN  
ONE HANDY GUIDE DURING THE PAST 12 MONTHS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q204 IF Q<204> NE "1" THEN GO 207

\*\*\*\*\*

205. IN WHICH AREA OR AREAS OF THE RIDEGUIDE OR MATCHLIST WERE YOU MOST  
INTERESTED ?

- |            |                               |                    |
|------------|-------------------------------|--------------------|
| 1. CARPOOL | 4. RAIL                       |                    |
| 2. VANPOOL | 5. PARK AND RIDE              |                    |
| 3. BUS     | 6. MAP OF HOV LANES           |                    |
|            | 7. OTHER COMMUTE RELATED INFO | (OTHER LINE = 412) |

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

206. ON A SCALE FROM "1" TO "9", WITH "1" BEING THE LEAST SATISFACTORY AND  
"9" BEING THE MOST SATISFACTORY, HOW WOULD YOU RATE YOUR SATISFACTION  
WITH THE RIDEGUIDE/MATCHLIST ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
99. REFUSED / DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

207. OK, WE'RE ALMOST DONE. THESE LAST FEW QUESTIONS ARE FOR CLASSIFICATION  
PURPOSES ONLY TO MAKE SURE THAT THE SURVEY IS REPRESENTATIVE OF ALL  
RESIDENTS IN THE SOUTHERN CALIFORNIA AREA.

WHICH OF THE FOLLOWING BEST DESCRIBES THE KIND OF WORK YOU DO ?

1. SECRETARIAL/CLERICAL
  2. PRODUCTION/CRAFTS
  3. SENIOR MANAGEMENT
  4. MIDDLE MANAGEMENT
  5. MAINTENANCE
  6. SALES/SERVICE
  7. PROFESSIONAL
  8. CONSTRUCTION
  9. MILITARY
  10. OTHER
  99. REFUSED/DON'T KNOW
- (OTHER LINE = 400)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

204. HAVE YOU RECEIVED A MATCHLIST OR RIDEGUIDE WHICH IS A FREE PERSONALIZED  
COMMUTE PLANNER CONTAINING ALL OF A COMMUTER'S TRANSPORTATION OPTIONS IN  
ONE HANDY GUIDE DURING THE PAST 12 MONTHS ?

1. YES
2. NO
9. DON'T KNOW/REFUSED

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q204 IF Q<204> NE "1" THEN GO 207

\*\*\*\*\*

205. IN WHICH AREA OR AREAS OF THE RIDEGUIDE OR MATCHLIST WERE YOU MOST  
INTERESTED ?

- |            |                               |                    |
|------------|-------------------------------|--------------------|
| 1. CARPOOL | 4. RAIL                       |                    |
| 2. VANPOOL | 5. PARK AND RIDE              |                    |
| 3. BUS     | 6. MAP OF HOV LANES           |                    |
|            | 7. OTHER COMMUTE RELATED INFO | (OTHER LINE = 412) |

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

206. ON A SCALE FROM "1" TO "9", WITH "1" BEING THE LEAST SATISFACTORY AND  
"9" BEING THE MOST SATISFACTORY, HOW WOULD YOU RATE YOUR SATISFACTION  
WITH THE RIDEGUIDE/MATCHLIST ?

1. 1
2. 2
3. 3
4. 4
5. 5
6. 6
7. 7
8. 8
9. 9
99. REFUSED / DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

207. OK, WE'RE ALMOST DONE. THESE LAST FEW QUESTIONS ARE FOR CLASSIFICATION  
PURPOSES ONLY TO MAKE SURE THAT THE SURVEY IS REPRESENTATIVE OF ALL  
RESIDENTS IN THE SOUTHERN CALIFORNIA AREA.

WHICH OF THE FOLLOWING BEST DESCRIBES THE KIND OF WORK YOU DO ?

1. SECRETARIAL/CLERICAL
  2. PRODUCTION/CRAFTS
  3. SENIOR MANAGEMENT
  4. MIDDLE MANAGEMENT
  5. MAINTENANCE
  6. SALES/SERVICE
  7. PROFESSIONAL
  8. CONSTRUCTION
  9. MILITARY
  10. OTHER
  99. REFUSED/DON'T KNOW
- (OTHER LINE = 400)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

208. TO WHAT TYPE OF INDUSTRY DOES YOUR EMPLOYER BELONG ?

1. CONSTRUCTION
2. MANUFACTURING/PRODUCTION
3. TRANSPORTATION, COMMUNICATION, ELECTRIC, GAS & SANITARY SERVICES
4. WHOLESALE TRADE
5. RETAIL TRADE
6. FINANCE, BANKS, INSURANCE OR REAL ESTATE
7. SERVICE, ENTERTAINMENT
8. HEALTH CARE
9. PUBLIC ADMINISTRATION/GOVERNMENT
10. AEROSPACE
11. MILITARY
12. OTHER
99. REFUSED/DON'T KNOW (OTHER LINE = 401)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q208 GO 210

\*\*\*\*\*

209. APPROXIMATELY HOW MANY EMPLOYEES WORK AT YOUR WORK SITE ? ARE THERE:

1. LESS THAN 25
2. 25 TO 99
3. 100 - 249
4. 250 - 499
5. MORE THAN 500
9. REFUSED/DON'T KNOW (IF DON'T KNOW, ASK RESPONDENT TO ESTIMATE)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

210. IN WHAT COUNTY DO YOU WORK ?

1. LOS ANGELES
2. ORANGE
3. RIVERSIDE
4. SAN BERNARDINO
5. VENTURA
6. IMPERIAL
7. KERN
8. SAN DIEGO
9. OTHER
99. REFUSED/DON'T KNOW (OTHER LINE = 402)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

211. HOW LONG HAVE YOU BEEN WORKING AT YOUR CURRENT LOCATION ?

\*\*\*\*\*

212. MONTHS OR YEARS

1. MONTHS
2. YEARS

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

213. SINCE YOU CHANGED YOUR WORK LOCATION IN THE LAST TWO YEARS,  
WHAT INFLUENCED YOU TO CHANGE YOUR WORK LOCATION ?

1. COMMUTE DISTANCE
2. COMMUTING COSTS
3. TRAFFIC CONGESTION
4. STRESS
5. OTHER
9. REFUSED/DON'T KNOW (OTHER LINE = 403)

(Multiple Response)

(DON'T READ PRE-CODED RESPONSES)

SKIP BEFORE Q213 IF Q<211> GT "24"  
AND Q<212> EQ "1" THEN GO 214  
SKIP BEFORE Q213 IF Q<211> GT "2"  
AND Q<212> EQ "2" THEN GO 214

\*\*\*\*\*  
214. IN TOTAL, HOW MANY MOTOR VEHICLES, INCLUDING AUTOMOBILES, TRUCKS, VANS,  
HIGHWAY MOTORCYCLES ARE OWNED OR LEASED BY MEMBERS OF YOUR HOUSEHOLD ?

- |      |                    |
|------|--------------------|
| 1. 1 | 8. 8               |
| 2. 2 | 9. 9               |
| 3. 3 | 10. 10             |
| 4. 4 | 11. OTHER          |
| 5. 5 | 99. REFUSED        |
| 6. 6 |                    |
| 7. 7 | (OTHER LINE = 417) |

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
215. DO YOU ALWAYS, SOMETIMES, OR NEVER HAVE A VEHICLE AVAILABLE FOR GETTING  
TO WORK ?

1. ALWAYS AVAILABLE
2. SOMETIMES AVAILABLE
3. NEVER AVAILABLE
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*  
216. IN WHAT COUNTY DO YOU LIVE ?

1. LOS ANGELES
2. ORANGE
3. RIVERSIDE
4. SAN BERNARDINO
5. VENTURA
6. IMPERIAL
7. KERN
8. SAN DIEGO
9. OTHER
99. REFUSED/DON'T KNOW (OTHER LINE = 404)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*  
217. HAVE YOU RECEIVED ANY RIDESHARING INCENTIVES FROM REGIONAL PROGRAMS  
DURING THE PAST 12 MONTHS ?

1. YES
2. NO

9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

SKIP BEFORE Q217 IF Q<216> NE "3"

AND Q<216> NE "4" THEN GO 219

SKIP AFTER Q217 IF Q<217> NE "1" THEN GO 219

\*\*\*\*\*

218. WHICH OF THE FOLLOWING RIDESHARE INCENTIVES HAVE YOU  
RECEIVED...?

1. OPTION RIDESHARE (SAN BERNARDINO ASSOCIATED GOVERNMENTS)
2. COMMUTER ASSISTANCE (RIVERSIDE COUNTY TRANSPORTATION COMMISSION)
3. CLUB RIDE
4. OTHER (OTHER LINE = 405)

(Multiple Response)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

219. HOW LONG HAVE YOU LIVED AT YOUR CURRENT ADDRESS ?

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

220. MONTHS OR YEARS

1. MONTHS
2. YEARS

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

221. SINCE YOU CHANGED YOUR HOME LOCATION IN THE LAST TWO YEARS,  
WHAT INFLUENCED YOU TO CHANGE WHERE YOU LIVED ?

1. COMMUTE DISTANCE
2. COMMUTING COSTS
3. TRAFFIC CONGESTION
4. STRESS FROM COMMUTING
5. CHANGED JOBS
6. OTHER
9. REFUSED/DON'T KNOW (OTHER LINE = 406)

(Multiple Response)

(DON'T READ PRE-CODED RESPONSES)

SKIP BEFORE Q221 IF Q<219> GT "24"

AND Q<220> EQ "1" THEN GO 222

SKIP BEFORE Q221 IF Q<219> GT "2"

AND Q<220> EQ "2" THEN GO 222

\*\*\*\*\*

222. ARE YOU . . . ?

1. UNDER 20 YEARS OLD
2. IN YOUR 20'S
3. 30'S
4. 40'S
5. 50'S
6. 60 OR OLDER
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

223. ARE YOU . . . ?

1. MARRIED
2. SINGLE
3. DIVORCED
4. WIDOWED
9. OTHER (OTHER LINE = 407)

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

224. TO WHICH OF THE FOLLOWING ETHNIC GROUPS DO YOU BELONG ?

1. WHITE, NOT HISPANIC
2. AFRICAN AMERICAN (BLACK)
3. HISPANIC
4. ASIAN
5. AMERICAN INDIAN
6. OTHER
9. REFUSED/DON'T KNOW (OTHER LINE = 419)

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

225. AND IS YOUR COMBINED TOTAL ANNUAL HOUSEHOLD INCOME . . . ?

1. LESS THAN \$20,000
2. \$20,000 TO \$34,999
3. \$35,000 TO \$49,999
4. \$50,000 TO \$64,999
5. \$65,000 TO \$79,999
6. \$80,000 TO \$99,999
7. \$100,000 OR MORE
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

226. ARE YOU THE PRIMARY WAGE EARNER IN YOUR HOUSEHOLD ?

1. YES
2. NO
9. REFUSED/DON'T KNOW

(PROMPT ONLY IF NO ANSWER)

\*\*\*\*\*

227. AND IS YOUR PERSONAL ANNUAL INCOME . . . ?

1. LESS THAN \$20,000
2. \$20,000 TO \$34,999
3. \$35,000 TO \$49,999
4. \$50,000 TO \$64,999
5. \$65,000 TO \$79,999
6. \$80,000 TO \$99,999
7. \$100,000 OR MORE
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

228. RECORD GENDER.

1. MALE
2. FEMALE

(DON'T READ PRE-CODED RESPONSES)

\*\*\*\*\*

229. FOR VALIDATION PURPOSES ONLY, COULD I HAVE YOUR NAME ?

\*\*\*\*\*

230. AND TO CONFIRM, YOUR PHONE NUMBER IS <<PHONE.NUMBER>> ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q230 IF Q<230> EQ "1" THEN GO END

\*\*\*\*\*

231. REVISED PHONE NUMBER:

SKIP AFTER Q231 GO END

\*\*\*\*\*

232. HOW DO YOU USUALLY GET TO THE BUS STOP ?

1. DRIVE
2. CARPOOL/VANPOOL
3. DROP-OFF
4. BICYCLE
5. WALK

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

233. HOW MANY MINUTES DOES IT USUALLY TAKE YOU TO GET FROM YOUR HOUSE  
TO THE BUS STOP ?

SKIP AFTER Q233 GO 22

\*\*\*\*\*

235. APPROXIMATELY HOW MANY EMPLOYEES WORK AT YOUR WORK SITE ? ARE THERE:

1. LESS THAN 25
2. 25 TO 99
3. 100 - 249
4. 250 - 499
5. MORE THAN 500
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

\*\*\*\*\*

236. ARE THERE ANY OTHER FULLY EMPLOYEED HOUSEHOLD MEMBERS WHO WORK AT A  
WORK SITE WITH APPROXIMATELY 100 TO 250 EMPLOYEES ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q236 IF Q<235> EQ "3"

AND Q<236> EQ "1" THEN GO 238

SKIP AFTER Q236 IF Q<235> EQ "3"

AND Q<236> EQ "2" THEN GO 239



SKIP AFTER Q236 IF Q<235> NE "3"  
AND Q<236> EQ "2" THEN GO END  
SKIP AFTER Q236 IF Q<235> NE "3"  
AND Q<236> EQ "1" THEN GO 4

\*\*\*\*\*  
237. APPROXIMATELY HOW MANY EMPLOYEES WORK AT YOUR WORK SITE ? ARE THERE:

1. LESS THAN 25
2. 25 TO 99
3. 100 - 249
4. 250 - 499
5. MORE THAN 500
9. REFUSED/DON'T KNOW

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q237 IF Q<237> EQ "3" THEN GO 2  
SKIP AFTER Q237 IF Q<237> NE "3" THEN GO END

\*\*\*\*\*  
238. OF THE PERSONS WORKING FULL-TIME IN A WORK SITE OF 100 TO 249 EMPLOYEES,  
I NEED TO SPEAK WITH THE PERSON WHO HAD THE MOST RECENT BIRTHDAY.  
WOULD THAT BE YOU ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q238 IF Q<238> EQ "1" THEN GO 2  
SKIP AFTER Q238 IF Q<238> EQ "2" THEN GO 4

\*\*\*\*\*  
239. DO YOU WORK 35 OR MORE HOURS PER WEEK ?

1. YES
2. NO

(READ PRE-CODED RESPONSES-EXCEPT FOR 'DON'T KNOW', 'REFUSED', ETC)

SKIP AFTER Q239 IF Q<239> EQ "1" THEN GO 2  
SKIP AFTER Q239 IF Q<239> EQ "2" THEN GO END

\*\*\*\*\*

## **APPENDIX B:**

# **Project Documentation of the 1998 State of the Commute Survey**

## **OVERVIEW**

Data for the 1998 State of the Commute study was obtained through 2,925 completed telephone interviews. A 1.8 percent sampling error is normally associated with sample sizes of 2,900. A 1.8 percent sampling error means that if this survey was conducted 100 times, one would be confident that 95 times out of 100 the characteristics of the sample would reflect the characteristics of the population within plus or minus 1.8 percent.

English and Spanish versions of the questionnaire were available to meet the language requirements of the respondents. A total of 525 interviews were completed in each county (with the exception of Imperial County) in order to make county comparisons possible. A 4.5 percent sampling error is normally associated with sample sizes of 500. This was the second time Imperial County was included within the State of the Commute study. Due to the size of Imperial County in terms of population, only 300 interviews were completed. The sampling error normally associated with sample sizes of 300 is 5.8 percent.

Each interview began with the screening question, "How many persons 18 years or older in your household work outside the home 35 or more hours per week?" Actual selection of eligible respondents was based on the person who had the most recent birthday. This process was used in order to avoid the possible bias of surveying a disproportionate number of women and children, since they are more likely to answer the telephone. Once interviewing had been completed, responses were weighted by the number of eligible respondents within the household. This ensures that small households are not over-represented in sample statistics. Furthermore, for the analysis at the regional level, data was additionally weighted by the working population in each county based on 1990 U.S. Census figures.

## **PROJECT INITIATION**

SCAG contracted with Strategic Consulting & Research (SCR) of Irvine, California to conduct the data collection efforts. On September 2, 1997, a project initiation meeting was held to finalize the project objectives, review the survey instrument and finalize the project timeline.

The survey was finalized, translated into Spanish, and entered into the Computer-Assisted Telephone Interviewing (CATI) system on September 2, 1997.

## **SURVEY PRETEST**

The pretest was conducted on August 28, 1997. Twenty surveys were completed and the data was reviewed to ensure that skip patterns were correct, and that questions were clearly understood by respondents. Since most of the survey questions were consistent with the previous State of the Commute questionnaires, results of the pretest led to only minor formatting changes but no changes in the basic structure of items.

## **SURVEYOR TRAINING**

An extensive surveyor training program was conducted. Forty-three interviewers received a three hour training program.

Telephone interviewers received project specific training which included:

- ◆ An overview of the project's background and objectives so that each surveyor could work more effectively with respondents to secure meaningful responses. This also helps surveyors identify any possible surveying issues so that they can be addressed before they become problems.
- ◆ The opportunity to conduct the questionnaire on-line with hypothetical respondents to familiarize themselves with the questionnaire and skip patterns.

- ◆ At least one test survey with a "live" respondent.
- ◆ A daily review with supervisory staff to discuss any interviewing issues that had been identified the previous day.

## **SURVEY SAMPLE**

Survey respondents' telephone numbers were generated based on random digit dialing using a clean and updated sample generation procedure.

SCR used Survey Sampling, Inc. (SSI) as its source for generating random digit dialing numbers. The sample was selected to achieve the designated sub-sample size for each of the counties by designating seven of the 10 digit telephone numbers. This means that the area code and any working prefixes in the sample set were identified. The first number in the exchange was generated to ensure that working blocks were used. The remaining three digits, which comprise the balance of the exchange, were then randomly generated.

## **WORKING BLOCKS**

The working blocks of phone numbers were supplied to SSI by a company called BellCore which controls the use of all phone numbers, working blocks, prefixes, and area codes for the United States. SSI receives tapes from BellCore every six weeks to update working blocks. They also receive all new area codes two years in advance with a predetermined activation date. Together, this ensures that SSI includes all active working blocks in their database. Since BellCore is the source of phone numbers in the United States, and SSI receives them as they are released, this is the most up-to-date method possible for securing active working blocks of phone numbers.

## **SCREENING FOR DISCONNECTS, BUSINESS AND CAR PHONES**

The sample was screened for disconnects and cross-referenced to eliminate numbers that are listed business numbers to reduce the number of non-productive calls. Since all these numbers are known not to be working residential numbers, it does not reduce the chances of reaching a qualified respondent. All businesses could not be eliminated from the calling sample without the possibility of

eliminating valid household phone numbers. Therefore, when a business was reached the call was terminated and logged as a business number to block any future call attempts to that number.

The sample was checked to eliminate car phone exchanges that are received as part of the original sample. No active residential phone numbers are lost in this process.

A total of 25,296 telephone numbers were ordered. The distribution of phone numbers for the sample before and after the initial screening is shown below:

The original sample was screened for disconnects and car phones, 13.8 percent of the original sample was initially eliminated, leaving a calling sample of 21,806 telephone numbers.

## **DATA COLLECTION PHASE**

Data collection began on September 3, 1997 and concluded on October 26, 1997.

## **SURVEY EXECUTION**

All surveys were conducted using SCR's in-house CATI calling center. Surveys were conducted Monday through Friday between 6:00 pm and 9:00 pm, on Saturday between 9:00 am and 9:00 pm, and on Sunday between 9:00 am and 9:00 pm. When a potential respondent was reached and could not complete the survey at that time, SCR scheduled a call back at the respondent's convenience or let the respondent call back at a time of their choice using SCR's toll-free number.

## **CALL-BACKS AND CALL DISPOSITIONS**

Each number was called a minimum of five times until the quota for each county was met. Call times were varied to increase the likelihood of making contact. Five call attempts were made to each number to minimize the potential bias resulting from only capturing "easy-to-reach" respondents.

## **BILINGUAL SURVEYING**

Surveys were conducted in either English or Spanish at the discretion of each respondent. A total of 354 surveys, or 12.1 percent of the total survey sample were conducted in Spanish at the respondent's request.

## QUALITY ASSURANCE

Quality assurance included on-going silent monitoring, review of completed surveys, random call backs and two on-site visits by SCAG staff during the data collection process.

## SILENT MONITORING

Every surveyor was silently monitored throughout the course of the project. During the initial stages of the project every surveyor was monitored after they had completed their training and results of the silent monitoring were discussed with the telephone surveyor. After project start-up, random silent monitoring was conducted during each shift.

## REVIEW OF DAILY PERFORMANCE STATISTICS

On a daily basis, performance statistics for each surveyor were reviewed to ensure that data integrity was maintained. Results of the previous day's survey efforts were discussed at the beginning of each shift with the telephone interviewers.

## VERIFICATION OF SURVEYS

Four hundred and twenty-five respondents, or 14.5 percent of the survey sample, were re-contacted by quality assurance staff to verify selected responses to selected questions.

## DATA PREPARATION

All data collected was reviewed by quality assurance staff to ensure data integrity.

A detailed review of the first 250 surveys collected was conducted to identify areas of potential concern. Based on the 1996 State of the Commute Study, a series of programs were used to review data integrity on an ongoing basis. Programs were used to:

- ◆ Identify missing data
- ◆ Identify excess data
- ◆ Verify the consistency of the skip patterns

- ◆ Check consistency of related responses
- ◆ Review other lines and pre-coded responses

## DATA TRANSFER

Data was collected in the CATI system and transferred to an SPSS format. All data transfer was conducted in-house with project staff. The data was transferred in four batches to allow SCAG staff the opportunity to begin data review and to develop programs for later use.

## CALLING STATISTICS

Of the 25,296 telephone numbers ordered, 3,490 were screened for disconnects and car phones, leaving a calling sample of 21,806 telephone numbers. All 21,806 numbers were used for calling. An average number of 2.4 calls per number were made to complete 2,959 surveys. The average survey length was 17 minutes and 3 seconds.

There were 4,953 ineligible phone numbers included in the screened sample. Ineligible numbers are outlined below:

### Ineligible Numbers

Disconnected numbers	2,615
Business numbers	1,709
FAX machines	629

There were 16,853 eligible numbers within the sample.

The sample included 3,427 numbers that were never reached during the survey time frame. The numbers never reached are outlined below:

### Never Reached

Perpetual answering machine	835
Perpetual busy	151
Perpetual no answer	2,441

A total of 13,346 potential respondents were reached. The disposition of these calls is outlined below:

**Numbers Reached**

Completed surveys	2,959*
No qualified respondent in household	2,063
Refusals	6,605
Language barrier, non-English or Spanish	232
On-line for requested call back	1,1,232
Incomplete interviews	335

\*2,944 surveys were within the designated counties, 15 were outside of the designated counties.

## APPENDIX C:

# A Guide to Transportation Agencies in Southern California.

### **Southern Southern California Association of Governments (SCAG):**

Over the past three decades, the Southern California Association of Governments has evolved as the largest of nearly 700 councils of government in the United States, functioning as the Metropolitan Planning Organization for six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. The region encompasses a population exceeding 15 million persons in an area of more than 38,000 square miles.

As the designated Metropolitan Planning Organization, the Association of Governments is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the state level.

**Executive Director:** Mark Pisano

**Contact:** Media Relations (213) 236-1800

**World Wide Web Address:** <http://www.scag.ca.gov>

### **Southern California Rideshare**

Southern California Rideshare, part of SCAG, is the nation's oldest and largest commute management and ridesharing organization. Southern California Rideshare serves a six-county area, including Los Angeles, Orange, Riverside, San Bernardino, Ventura and Imperial counties. It provides service and information to employers and the general public on the following transportation issues:

- ◆ Ridesharing (carpooling, vanpooling, bicycling and walking)
- ◆ Public and private transit (bus and rail)
- ◆ Telecommuting (working at home)
- ◆ Alternative work hours and compressed work weeks
- ◆ Guaranteed ride home programs (offering ridesharers a free/subsidized ride home in case of emergency or unexpected overtime)

**Director:** Jim Sims

**Contact:** Media Relations (213) 236-1835

**World Wide Web Address:**

<http://www.scag.ca.gov/commute>

### **California Department of Transportation (Caltrans):**

Caltrans is the state agency responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of intercity passenger rail service in California, and is a leader in promoting the use of alternative modes of transportation. Los Angeles and Ventura counties are located in Caltrans District 7. San Bernardino and Riverside counties are located in Caltrans District 8. Imperial and San Diego counties are located in Caltrans District 11. Orange County is located in Caltrans District 12. For information on statewide programs, call the Sacramento office. For information on local/regional programs, call the appropriate district office.

**Director (Sacramento):** Jose Medina

**Contact:** (916) 654-5266

**World Wide Web Address:** <http://www.dot.ca.gov>

**District 7 Director:** Tony Harris

**Contact:** (213) 897-3656

**World Wide Web Address:**

<http://www.dot.ca.gov/dist07>

**District 8 Director:** Stan Lisiewicz

**Contact:** (909) 383-4561

**World Wide Web Address:**

<http://www.dot.ca.gov/dist8>

**District 11 Director:** Gary Gallegos

**Contact:** (619) 688-6785

**World Wide Web Address:**

<http://www.dot.ca.gov/dist11>

**District 12 Director:** Mike McManus  
**Contact:** (949) 724-2000  
**World Wide Web Address:**  
<http://www.dot.ca.gov/dist12>

### **Los Angeles County Metropolitan Transportation Authority (MTA):**

The LACMTA replaces the former Los Angeles County Transportation Commission and Southern California Rapid Transit District. The agency is responsible for all regional bus and rail operations within Los Angeles County, planning and construction of a countywide rail system, development of effective transportation policies and a long-range plan, programming of federal, state and local revenues for public transit, transportation demand management, bikeways, and highway projects in Los Angeles County, and coordination of activities among the county's many transportation agencies.

**Chief Executive Officer:** Julian Burke  
**Contact: Media Relations :** (213) 922-2700  
**World Wide Web Address:** <http://www.mta.net>

### **Mojave Desert Air Quality Management District**

The MDAQMD's boundaries encompass the High Desert region of San Bernardino County and the Palo Verde Valley of Riverside County. The MDAQMD is responsible for regulating stationary sources of air pollution within its jurisdiction. To this end, the District implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality.

**Air Pollution Control Officer:** Charles L. Fryxell  
**Contact:** (760) 245-1661  
**World Wide Web Address:**  
<http://www.mdaqmd.ca.gov>

### **Orange County Transportation Authority (OCTA):**

The OCTA is a multimodal transportation agency responsible for freeway, street and rail planning and development in Orange County. OCTA was formed

in 1991 by the consolidation of seven separate transportation agencies, and is the primary transit provider in an urban county of more than 2.6 million people.

**Chief Executive Officer, OCTA:** Lisa Mills  
**Contact:** OCTA Administrative Office  
(714) 560-OCTA  
**World Wide Web Address:** <http://www.octa.net>

### **Riverside County Transportation Commission (RCTC):**

RCTC acts as the policy-making body overseeing a wide range of transportation activities within Riverside County. The thirty member board provides a forum for local city and county representatives to participate in and influence the decision-making process regarding transportation planning, programming and funding issues. In addition to fulfilling its statutory responsibilities under AB1246 (Ingalls), RCTC implements Measure A, Riverside County's half cent sales tax for transportation improvements, and serves in several other capacities including Service Authority for Freeway Emergencies (SAFE), Freeway Service Patrol (FSP), and Congestion Management Agency (CMA).

**Executive Director:** Eric Haley  
**Contact:** Media Relations (909) 787-7141  
**World Wide Web Address:** <http://www.rctc.org>

### **San Bernardino Associated Governments (SANBAG):**

SANBAG is a countywide coalition of elected officials that coordinates regional issues and is responsible for transportation planning, financing, and related programs in San Bernardino County. As a Council of Governments, SANBAG provides the only forum in which city and county representatives in San Bernardino County regularly discuss issues of mutual concern that extend beyond city boundaries.

**Executive Director:** Norman King  
**Contact:** Media Relations (909) 884-8276  
**World Wide Web Address:**  
<http://www.sanbag.ca.gov>

### **South Coast Air Quality Management District (SCAQMD):**

The SCAQMD is the air pollution control agency for portions of the urban areas of Los Angeles,

Orange and parts of Riverside and San Bernardino counties. The agency is responsible for controlling emissions primarily from stationary sources of air pollution (e.g., oil refineries, power plants, and gas stations). The AQMD also has some authority over mobile sources (e.g., cars, buses, and trucks) and is responsible for the creation and enforcement of Rule 2202, On-Road Motor Vehicle Mitigation Options.

**Executive Officer:** Barry R. Wallerstein, D.ENV

**Contact:** Public Information Center

(800) CUT-SMOG

**World Wide Web Address:** <http://www.aqmd.gov/>

### **Southern California Regional Rail Authority (SCRRA):**

SCRRA is a regional Joint Powers Agency (JPA) made up of Los Angeles County Metropolitan Transportation Authority, Orange County Transportation Authority, Riverside County Transportation Commission, San Bernardino Associated Governments, and Ventura County Transportation Commission. SCRRA plans, designs, constructs, and administers the operation of Metrolink, the regional passenger rail system serving the counties of Los Angeles, Orange, Riverside, San Bernardino, and Ventura. Metrolink is one of the fastest growing commuter rail systems in the country. Today, Metrolink offers six rail routes, 46 stations, 416 miles of track in five counties, operates on average 126 trains carrying about 28,000 passengers daily.

**Executive Director:** David Solow

**Contact:** Media Relations (213) 452-0233

**World Wide Web Address:**

<http://www.metrolinktrains.com>

### **Ventura County Air Pollution Control District**

The VCAPCD is the air pollution control agency for Ventura County, responsible for controlling emissions from new and existing sources in the county. The District develops, implements, and enforces an air quality management plan for Ventura County that complies with state and federal laws. In addition, the District develops regulations to reduce emissions from stationary and area sources, and permits stationary sources.

**Air Pollution Control Officer:**

Richard H. Baldwin

**Contact:** Public Information Office (805) 645-1415

**World Wide Web Address:** <http://www.vcapcd.org>

### **Ventura County Transportation Commission (VCTC):**

VCTC develops and implements transportation policies, projects, funding and priorities for projects that involve highways, bus services, bicycling and bike paths, aviation, commuter and freight railroads and other transportation issues in Ventura County.

The Commission controls and reviews the use of federal, state and local funds for transportation and related projects, and also serves as the Airport Land Use Commission, Service Authority for Freeway Emergencies, Congestion Management Agency, and Consolidated Transportation Services Agency for Ventura County.

**Executive Director:** Ginger Gherardi

**Contact:** Media Relations (805) 654-2888

**World Wide Web Address:**

<http://www.goventura.org>